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ABSTRACT

A report on the influx of scientists, engineers, and physicians from abroad is presented to assess recent trends in terms of numbers, occupations, and national backgrounds. Both immigrant and nonimmigrant components are included. Descriptions are made in connection with migration patterns, aliens adjusted to immigrant status, demographic characteristics, source regions, work activities, employment, sex differences, and citizenship. The sharp increase in immigrants over the 1965 level is described as a result of the October 1965 level is described as a result of the October 1965 ammendments of the immigration law. Information on nonimmigrants shows an increase of scientist and engineer numbers from 5,300 in 1965 to 6,100 in 1970; an increase of science and engineering students from 56,800 in 1967 to 72,100 in 1970; and a 222 percent increase of doctorate recipients between 1960 and 1970. About 8 percent of all scientists in the National Register of Scientific and Technical Personnel in 1970 are found to be foreign-born. Besides statistical data and technical notes, a list of science resources publications is included. (CC)

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FOREWORD

THIS REPORT CONSOLIDATES data from various sources on the inflows of scientists, engineers, and physicians from abroad in order to assess recent trends in terms of numbers, occupations, and national backgrounds of these personnel. The report includes both immigrant and nonimmigrant components of scientific and technical manpower from abroad.

Part I of the present report covers overall trends between 1949 and 1970 in admission of scientists, engineers, and physicians to the United States as immigrants and elaborates on the results of the October 1965 revisions in the national immigration law. Part II presents information on "nonimmigrants"—persons admitted in various categories for temporary residence. Part III is concerned with educational exchange and includes data on foreign scholars and students located during specific periods in U. S. academic institutions; and trends in doctorates awarded to foreign-born candidates by U. S. universities. Part IV shows data on characteristics of foreign-born scientists in the United States included in the 1970 National Register of Scientific and Technical Personnel.

It should be recognized that data presented in the various parts of the report come from sources which may overlap to some extent. The extent of such overlap is not known. Therefore, data presented separately in this report are not additive.

This report was prepared in the Foundation's Division of Science Resources Studies. General supervision was provided by Robert W. Cain, Head, Sponsored Surveys and Studies Section.

Charles E. Falk
Director
Division of Science Resources Studies

June 1972

Acknowledgments

Joseph Gannon prepared this report under the direction of Norman Seltzer, Study Direct
Scientific Manpower Studies Group. Christine C. Stewart prepared the statistical materials co
tained herein.

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Naturalization Service, U.S. Department of Justice are gratefully acknowledged.

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HIGHLIGHTS

IMMIGRANTS

- The 13,300 immigrant scientists and engineers admitted to the United States in fiscal year 1970 were a third more than in 1969, and two and one-half times the number in 1965. Physicians advanced also, but less spectacularly, from 2,000 in 1965 to nearly 3,000 yearly in the next 5 years. These sharp increases over 1965 levels occurred under the October 1965 amendments to the immigration law.
- Immigrant natural scientists and engineers have been equivalent to 1 out of 5 of the net addition to science and engineering employment since 1965, up noticeably from the less than 1 in 10 for the period 1950–64.
- Well over one-half of the immigrant scientists and engineers in 1970 had last resided in Asia. In 1965, the last year under the old provisions of the immigration law, only 10 percent of a much smaller number were from Asia.
- The 2,900 Indian scientists and engineers in 1970 were the largest number admitted from any country over the last 20 years, as were the nearly 800 physicians from the Philippines in both 1970 and 1969.
- Among the 3,800 immigrant scientists and engineers in 1970 who had been born in one country and last resided elsewhere before entering the United States were 740 such personnel who had been born in mainland China and 620 in India.

NONIMMIGRANTS

- The yearly inflow of nonimmigrant scientists and engineers numbered 6,100 in 1970, up from 5,300 in 1965. Of these, 4,000 to 4,300 yearly were exchange visitors. The remainer were temporary workers performing services unavailable in the United States, temporary workers of distinguished merit and ability, and industrial trainees. (See technical notes.)
- Foreign science and engineering students rose from 56,800 in 1967 (prior data not comparable) to 72,100 in 1970. Foreign medical students numbered 2,000 to 2,100 yearly. Asia was the source of over 50 percent of the science and engineering students, and about 40 percent of the medical students.
- Foreign (non-U.S. citizen) recipients of doctorates of science and engineering from U.S. universities grew 222 percent between 1960 and 1970, from 1,000 to 3,000 yearly. U.S. citizen recipients advanced a lesser 182 percent, from 5,100 to 14,300. Over the same period, those intending to remain in the United States for postdoctoral work and/or study grew from 50 percent to 59 percent of the annual total of foreign recipients of U.S. doctorates.

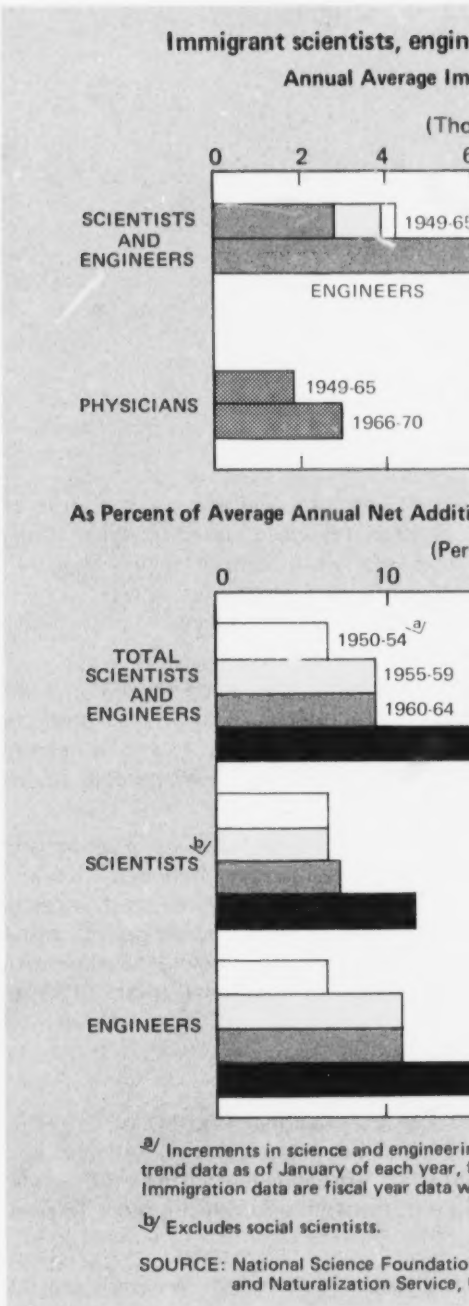
FOREIGN-BORN SCIENTISTS IN THE UNITED STATES

- About 8 percent of all scientists in the National Register of Scientific and Technical Personnel in 1970 had been born abroad and had also received their secondary education abroad.[1] Over three-fifths held Ph.D.'s, and about one-half were in research and development (including R&D management).

[1] The foreign-born scientists in the National Register include both immigrants and U.S. citizens.

Part I

IMMIGRANT SCIENTISTS, ENGINEERS, AND PHYSICIANS



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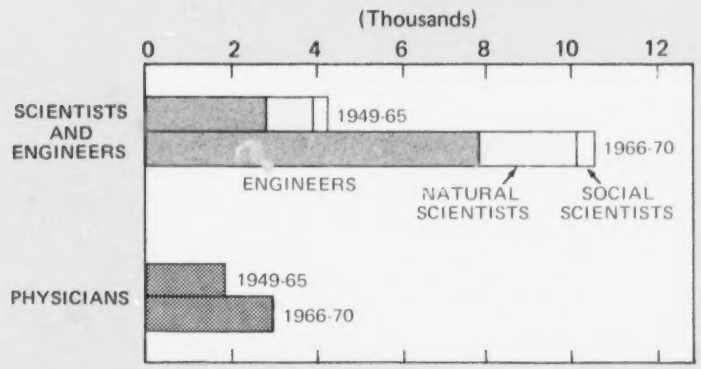
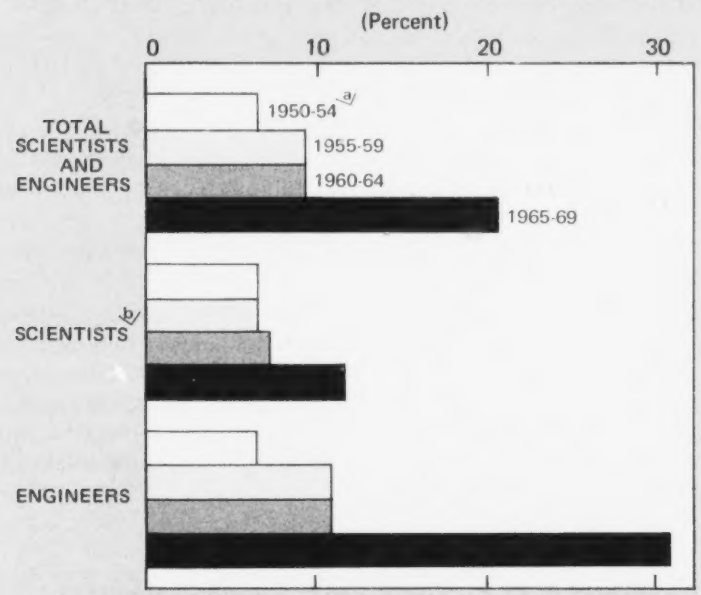
Immigrant scientists, engineers and physicians

Annual Average Immigration



As Percent of Average Annual Net Additions to S&E Employment in U.S.



a/ Increments in science and engineering employment are based on trend data as of January of each year, first available for January 1950. Immigration data are fiscal year data with 1950 the beginning year.

b/ Excludes social scientists.

SOURCE: National Science Foundation, from data of the Immigration and Naturalization Service, U.S. Department of Justice.

Trends

The 56,300 immigrant[1] scientists and engineers admitted to the United States in the 5 years between 1966 and 1970 were only 18 percent under the 68,900 during the preceding 17 years, 1949–65.[2] Immigrant physicians numbered 14,800 and 26,900, respectively, in the two periods. Engineers were 70 percent of the scientist and engineer total in both periods, with natural scientists roughly 25 percent, and social scientists about 5 percent. The growing immigration followed the October 1965 amendments to the national immigration law.

[1] As used in this report such terms as "to immigrate," "to enter," "to be admitted," etc. mean to achieve an alien status as a lawful permanent resident of the United States. These terms thus include not only immigrants physically arriving in the United States during a year, but also those already resident as nonimmigrants who changed to immigrant status.

[2] Comparable data on employment of scientists and engineers in the United States are unavailable prior to 1949.

Immigrant scientists, engineers, physicians and surgeons, fiscal years 1949–70

Fiscal year	Total scientists and engineers	Engineers[a]	Natural scientists[a]	Social scientists[a]	Physicians and surgeons
1949	1,369[b]	956	413	na	1,148
1950	2,045[b]	1,279	766	na	1,848
1951	2,098[b]	1,591	507	na	1,387
1952	3,449	2,399	805	245	1,201
1953	2,866	2,064	654	148	845
1954	3,336	2,400	800	136	1,040
1955	3,002	2,071	791	140	1,046
1956	3,952	2,804	986	162	1,388
1957	6,046	4,547	1,345	154	1,990
1958	5,380	4,032	1,212	136	1,934
1959	5,290	3,950	1,188	152	1,630
1960	4,550	3,354	1,043	153	1,574
1961	4,171	2,890	1,102	179	1,683
1962	4,297	2,940	1,165	192	1,797
1963	5,933	4,014	1,688	231	2,093
1964	5,762	3,725	1,754	283	2,249
1965	5,345	3,446	1,597	302	2,012
1966	7,205	4,915	1,949	341	2,549
1967	12,523	8,821	3,158	544	3,325
1968	12,973	9,313	3,110	550	3,060
1969	10,255	7,150	2,601	504	2,756
1970	13,337	9,305	3,264	768	3,155

[a] Includes professors and instructors.

[b] Total excludes a small number of social scientists for whom data are not available.

Source: National Science Foundation, based on data of the Immigration and Naturalization Service, U.S. Department of Justice.

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equivalent to over 20 percent of the aver
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[3] The Eastern Hemisphere includes all areas
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[4] The national origins system of immigration
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immigration laws, because the Immigration and
development of the national origins system see Vis
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[5] The only restrictions on Western Hemisphere
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sphere, and the prescribed standards to be met by

[6] For analysis of the impact of the Displaced
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Natural scientists[a]	Social scientists[a]	Physicians and surgeons
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507	na	1,387
805	245	1,201
654	148	845
800	136	1,040
791	140	1,046
986	162	1,388
1,345	154	1,990
1,212	136	1,934
1,188	152	1,630
1,043	153	1,574
1,102	179	1,683
1,165	192	1,797
1,688	231	2,093
1,754	283	2,249
1,597	302	2,012
1,949	341	2,549
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3,264	768	3,155

s for whom data are not available.
a of the Immigration and Naturalization Service.

The much larger inflows of scientists and engineers since 1965 were equivalent to over 20 percent of the average annual net additions to scientist and engineer employment in the United States, up noticeably from the 6 percent to 9 percent during the prior 15-year period. Immigrant engineers were equivalent to 31 percent of the average annual net addition to engineer employment in the 1965–69 period, compared with a 12-percent rate for scientists.

From 1949 through 1965 the bulk of the immigrant scientists and engineers came from the Eastern Hemisphere,[3] primarily Europe. During these years the national origins system of national quotas was the central feature of immigration law with respect to the Eastern Hemisphere.[4] This system permitted immigration from Eastern Hemisphere nations largely on the basis of the national origins of the U.S. population in 1920. Western Hemisphere immigration was smaller, even though generally unrestricted.[5]

The increases and changing patterns of immigration of the 1949–65 period were significantly due to amendments to the basic immigration law and legislation which permitted displaced persons following the Second World War to begin immigration to the United States.

The increase in immigrant scientists and engineers from 1,400 in 1949 to 3,400 in 1952 followed the Displaced Persons Act of June 25, 1948,[6] with the decline in 1953 following the expiration of this Act. Similarly, the substantial increase in scientists and engineers, to 6,000 yearly by 1957, appears to have originated largely in the Refugee Relief Act of 1953.[7] Of lesser importance was

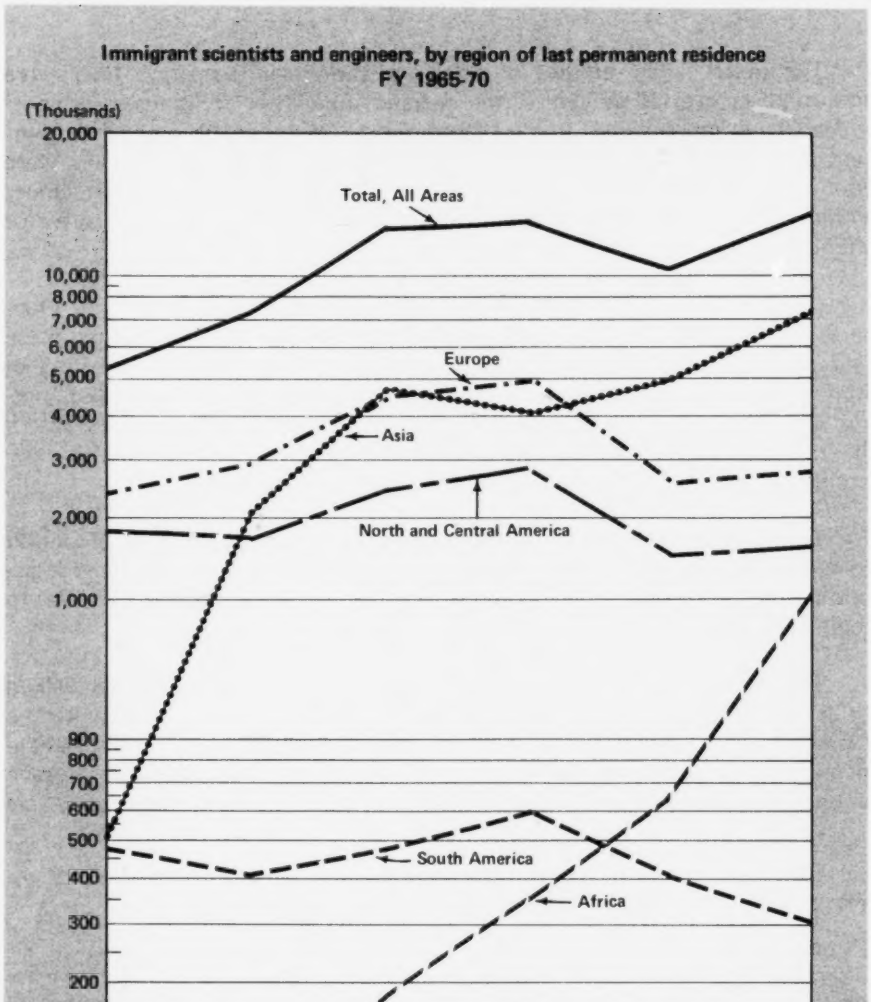
[3] The Eastern Hemisphere includes all areas of the world except North America, Central America, and South America, which comprise the Western Hemisphere.

[4] The national origins system of immigration was developed in the 1920's as the basis of U.S. immigration policy. In 1952 this system, together with other permanent provisions of the immigration laws, because the Immigration and Nationality Act of 1952. For details on the development of the national origins system see Visa Office, Department of State, *Visa Work of the Department of State and the Foreign Service, June 1, 1957*, Department of State publication 6510, Department and Foreign Service Series 69, July 1968. (Washington, D. C. 20402: Supt. of Documents, U. S. Government Printing Office.)

[5] The only restrictions on Western Hemisphere immigration under the national origins system of immigration were the quotas applicable to dependent countries of the Western Hemisphere, and the prescribed standards to be met by all applicants.

[6] For analysis of the impact of the Displaced Persons Act on immigration generally, see Department of Justice, Immigration and Naturalization Service, *Annual Report, 1953*. (Washington, D. C. 20402: Supt. of Documents, U. S. Government Printing Office.)

[7] For analysis of the impact of the Refugee Relief Act on immigration generally, see Department of Justice, Immigration and Naturalization Service, *Annual Report, 1958*. (Washington, D. C. 20402: Supt. of Documents, U. S. Government Printing Office).



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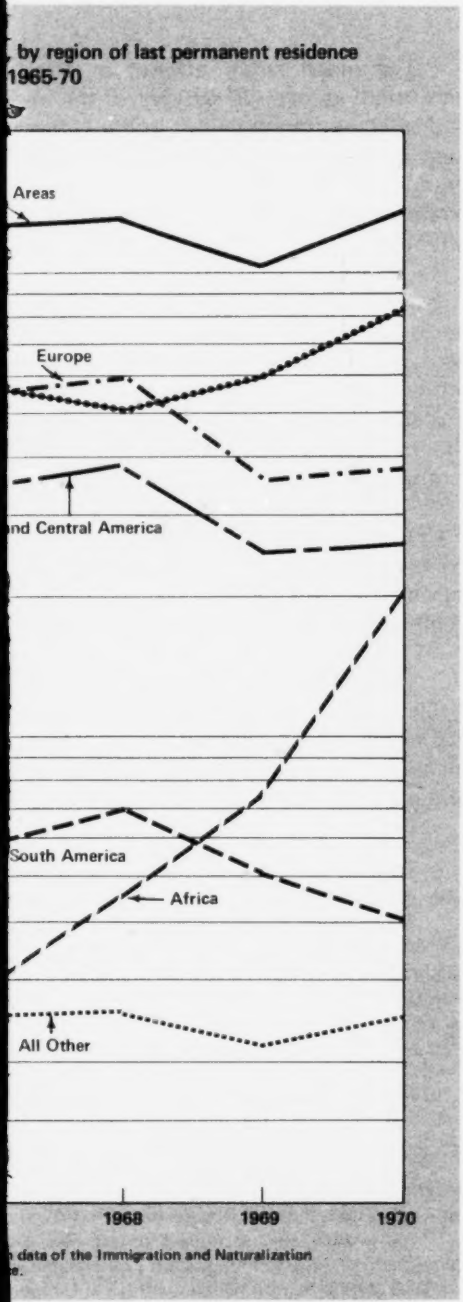


the Immigration Act of 1952,[8] whereby increased numbers of skilled persons were admitted under a new priority system favoring such immigrants. Both the Refugee Relief Act and the predecessor Displaced Persons Act allowed refugees to enter above the standard limitations of the general immigration law. Following the expiration of the Refugee Relief Act in June 1957 immigrant scientists and engineers dropped steadily, to 4,200 by 1961.

The Alien Skilled Specialist Act of October 1962[9] permitted the immigration of highly educated and technically trained aliens who had been on waiting lists for entry prior to April 1962. Scientist and engineer immigration rose to 5,900 in 1963, but dropped off somewhat by 1965, reflecting the diminished impact of this law.

As the 1965 revisions of the basic immigration law[10] took hold, record numbers of scientists and engineers immigrated into the United States, and the migration patterns shifted noticeably. Under interim changes in force between fiscal years 1966–68, unused portions of national quotas of Eastern Hemisphere countries such as Germany and the United Kingdom were reallocated to other Eastern Hemisphere (primarily Asian) nations with waiting lists of would-be immigrants. Thus, total scientist and engineer immigration increased to 7,200 in 1966 and to roughly 13,000 in 1967 and 1968. The Asians rose to 4,700 in 1967, but they decreased by 700 in 1968. The European increase of 500 during this period may have occurred in anticipation of the fact that would-be immigrants from formerly under-subscribed European countries such as Germany and the United Kingdom would compete in 1969, for the first time, with existing backlogs of Asian immigrants on a first-come first-served basis. The Western Hemisphere numbers also increased by 500 in 1968 (from 3,100 in 1967), possibly in anticipation of the 120,000 limitation on total immigration from the Hemisphere first effective in 1969.

[8] Immigration and Nationality Act of 1952 (Public Law 414, 82nd Congress, 66 Statute 163).

[9] Immigration and Nationality Act of 1952 (Public Law 414, 82nd Congress, 66 Statute 163) as amended by Act of Oct. 24, 1962 (Public Law 885, 87th Congress, 76 Statute 1247).

[10] Immigration and Nationality Act of 1952 (Public Law 414, 82nd Congress, 66 Statute 163) as amended by Act of Oct. 3, 1965 (Public Law 89-236, 89th Congress, 79 Statute).

In 1969—the first year the 1965 revisions applied in full to all countries—immigrant scientists and engineers declined to 10,300. The Asian influx again advanced—to 4,900—based largely on increased numbers of third preference (the professional preference) immigrants from the Philippines. Offsetting were the decreased numbers from Europe and the general decrease in the Western Hemisphere (2,600 and 2,000, respectively).

The 13,300 immigrant scientists and engineers in 1970 were a record for the past 20 years. This increase over 1969 reflected largely the unprecedented 7,500 scientists and engineers from Asia. Similarly, the 3,200 physicians included a record 1,700 from this continent.

Preliminary data available for fiscal year 1971 show 13,100 immigrant scientists and engineers.[11] This small decrease may reflect the April 1970 amendments to the Immigration Law.[12] The revisions permitted some aliens of distinguished merit and ability to enter the United States as nonimmigrants for employment in positions that may be permanent in nature, or as "intra-company transferees." Formerly such entrants could not work in the United States unless they became immigrants. The slowdown in the American economy in 1970 may also have been a factor in the fewer immigrant scientists and engineers that year.

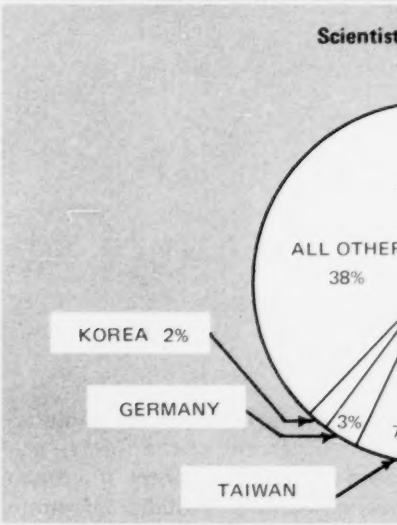
The 1971 preliminary data also show 5,700 immigrant physicians and surgeons. This total is well above the prior record of 3,300 in 1967.

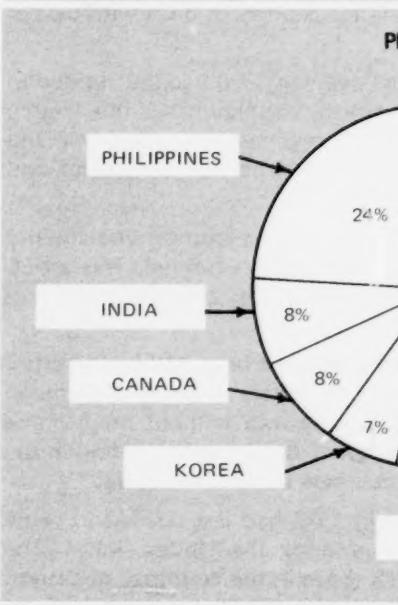
Data by country of last residence show that until 1965 the United Kingdom, Canada, and Germany were the leading sources of immigrant scientists, engineers, and physicians (appendix tables B–1 and B–2). Over the next 5 years these inflows remained large, but by 1969 India was the leading source of scientists and engineers, and the Philippines of physicians. By 1970 the respective numbers from these countries totaled 2,900 and 770. Indian scientists and engineers were the largest number ever from any country. The 780 Philippine physicians entering in 1970 were exceeded only by the 790 in 1969.

[11] Data for 1971 will be published in a separate report of the National Science Foundation.

[12] Immigration and Nationality Act of 1952 (Public Law 414, 82nd Congress, 66 Statute 163) as amended by Act of Apr. 7, 1970 (Public Law 91–225, 91st Congress, 84 Statute 116).

Immigrant scientists, enginee
United States by count





SOURCE: National Science Foundation
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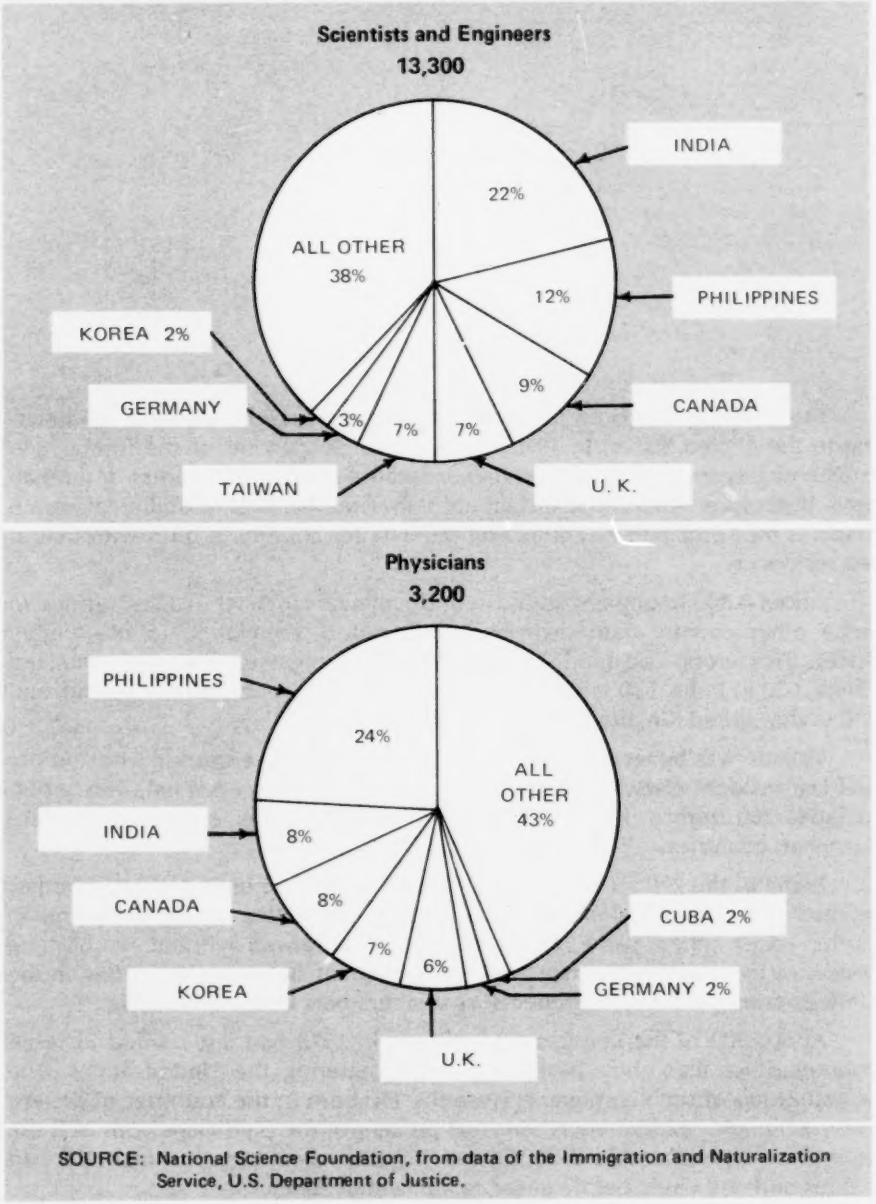
Immigrant scientists, engineers, and physicians admitted to the United States by country of last residence, FY 1970



SOURCE: National Science Foundation, from data of the Immigration and Naturalization Service, U.S. Department of Justice.

Migration Patterns

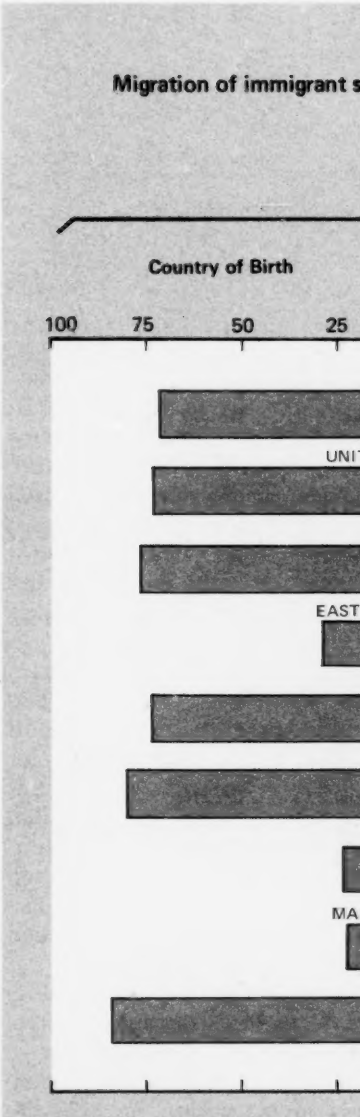
Many immigrants born in one country reside elsewhere before immigrating to the United States. In 1970, for example, 28 percent of the foreign scientists, engineers, and physicians had emigrated from some country other than their birthplace. Additional insight into the international mobility of immigrants is thus obtained by comparing the data for country of birth with that of last residence.

About 3,800 immigrant scientists and engineers in 1970 had last resided in some other country than their birthplace before emigrating to the United States. This group included 740 scientists and engineers born in mainland China, 620 in India, 530 in the countries of Eastern Europe, 360 in Pakistan, and 210 in the United Kingdom (appendix table B–3).

Canada was by far the major "way-station" for those born in one country and last resident elsewhere, accounting for 1,000 such personnel. This group includes 260 born in India, 150 in the United Kingdom, and 110 in Eastern European countries.

Many of the 220 scientists and engineers who were born and had also last resided in mainland China had come directly from China as nonimmigrants in earlier years; others came via Hong Kong and Taiwan without establishing residence in either place. They acquired immigrant status while residing in the United States (primarily as students) as visa numbers became available.

About 800 of the immigrant physicians in 1970 had last resided in some country other than their birthplace before entering the United States. The largest group of such immigrants were the 150 born in the countries of Eastern Europe but last resident elsewhere—63 percent of the physicians born in these countries (appendix table B–4). Of the 360 physicians born in India, 130 had last resided elsewhere before entering the United States.



[a] Numbers for countries of last residence

[b] Includes 42 immigrants last resident in

SOURCE: National Science Foundation,
Service, U.S. Department of Ju

ountry reside elsewhere before immigrat-
r example, 28 percent of the foreign sci-
d emigrated from some country other than
into the international mobility of immi-
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s and engineers in 1970 had last resided in
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ientists and engineers born in mainland
ries of Eastern Europe, 360 in Pakistan, and
x table B–3).

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ting for 1,000 such personnel. This group
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e directly from China as nonimmigrants in
g Kong and Taiwan without establishing
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ysicians in 1970 had last resided in some
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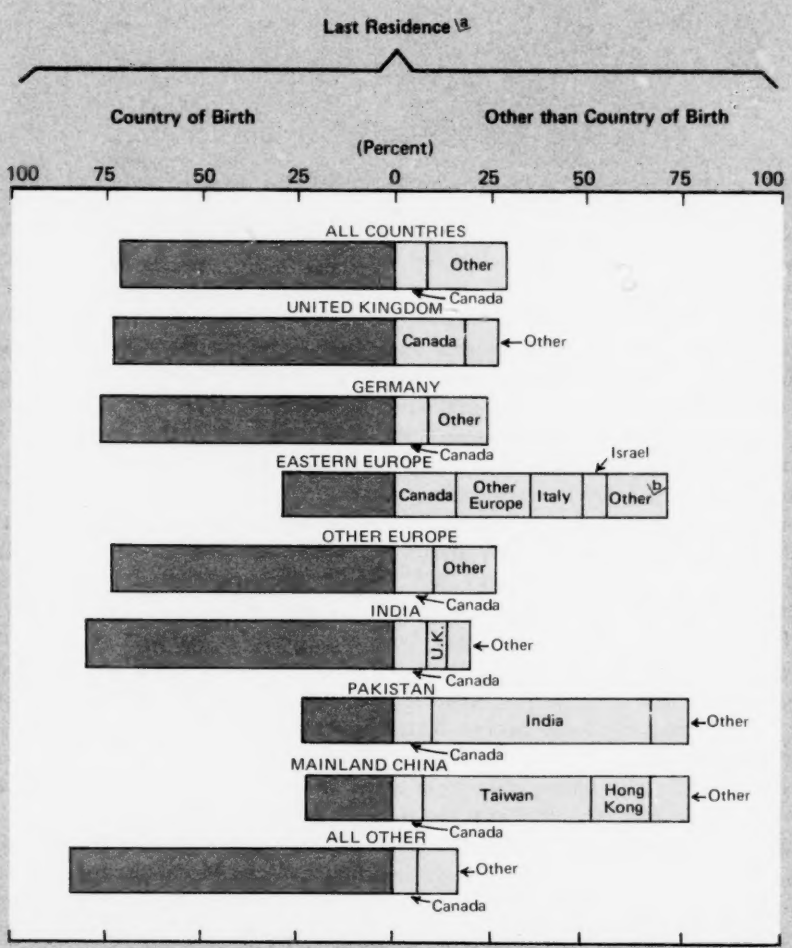
Migration of immigrant scientists and engineers, by last residence FY 1970



[a] Numbers for countries of last residence in appendix table B-1.

[b] Includes 42 immigrants last resident in Germany and 24 in United Kingdom.

SOURCE: National Science Foundation, from data of the Immigration and Naturalization Service, U.S. Department of Justice.

Occupation

The 9,300 immigrant engineers in 1970, the largest of the broad occupational groups covered in this report, were 30 percent above the 1969 inflow, and natural scientists advanced a nearly comparable 26 percent. The 770 social scientists admitted in 1970, however, were 52 percent higher than in 1969. Among the engineers in 1970 were 80 classified as professors and instructors as were 460 natural scientists and 230 social scientists.

Scientists, engineers, physici
as immigrants, by

Occupation[a]	N
Scientists and engineers	
Engineers	
Aeronautical	
Chemical	
Civil	
Electrical	
Industrial	
Mechanical	
Metallurgical and metallurgists	
Mining	
Sales	
Other engineering[b]	
Natural scientists	
Agricultural scientists[c]	
Biologists[d]	
Chemists	
Geologists and geophysicists	
Mathematicians[e]	
Physicists	
Other natural scientists	
Social scientists	
Economists	
Psychologists	
Other social scientists	
Physicians and surgeons	

[a] Includes professors and instructors in ea
[b] Includes those who classified themselve
engineering fields, thus, the itemized engi
represented. This group also includes speci
table.
[c] Includes foresters and conservationists.
[d] Includes professors and instructors of m
[e] Includes statisticians and actuaries.

Note: Percent distribution may not add to

Source: National Science Foundation, base
U.S. Department of Justice.

Scientists, engineers, physicians and surgeons admitted to the United States as immigrants, by occupation, fiscal years 1969 and 1970

Occupation[a]	1969 Number	1969 Percent distribution	1970 Number	1970 Percent distribution	Percent change
Scientists and engineers	10,255	—	13,337	—	30.1
Engineers	7,150	100.0	9,305	100.0	30.1
Aeronautical	126	1.8	105	1.1	−16.7
Chemical	796	11.1	908	9.8	14.1
Civil	917	12.8	1,509	16.2	64.6
Electrical	1,128	15.8	1,464	15.7	29.8
Industrial	248	3.5	356	3.8	43.5
Mechanical	1,201	16.8	1,618	17.4	34.7
Metallurgical and metallurgists	116	1.6	160	1.7	37.9
Mining	47	.7	59	.6	25.5
Sales	55	.8	63	.7	14.5
Other engineering[b]	2,516	35.2	3,063	32.9	21.7
Natural scientists	2,601	100.0	3,264	100.0	25.5
Agricultural scientists[c]	309	11.9	380	11.6	23.0
Biologists[d]	296	11.4	388	11.9	31.1
Chemists	1,282	49.3	1,495	45.8	16.6
Geologists and geophysicists	120	4.6	162	5.0	35.0
Mathematicians[e]	238	9.2	348	10.7	46.2
Physicists	291	11.2	401	12.3	37.8
Other natural scientists	65	2.5	90	2.8	38.5
Social scientists	504	100.0	768	100.0	52.4
Economists	249	49.4	370	48.2	48.6
Psychologists	123	24.4	163	21.2	32.5
Other social scientists	132	26.2	235	30.6	78.0
Physicians and surgeons	2,756	—	3,155	—	14.5

[a] Includes professors and instructors in each field.

[b] Includes those who classified themselves as engineers but did not indicate the specialty within the overall engineering fields, thus, the itemized engineering categories listed in the table may be somewhat underrepresented. This group also includes specialized engineering classifications not presented individually in the table.

[c] Includes foresters and conservationists.

[d] Includes professors and instructors of medical sciences.

[e] Includes statisticians and actuaries.

Note: Percent distribution may not add to 100 because of rounding.

Source: National Science Foundation, based on data of the Immigration and Naturalization Service, U.S. Department of Justice.

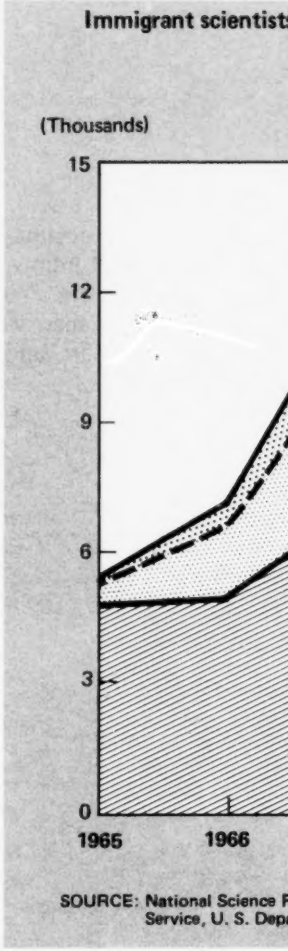
n 1970, the largest of the broad occupa- were 30 percent above the 1969 inflow, early comparable 26 percent. The 770 owever, were 52 percent higher than in) were 80 classified as professors and sts and 230 social scientists.

Aliens Adjusted to Immigrant Status

A large part of the increase in immigrant scientists, engineers, and physicians attributed to the October 1965 revisions of the National Immigration Law included aliens already living in the United States as nonimmigrant "temporary" residents. The nonimmigrant classifications comprise students, by far the largest group; temporary workers whose services were otherwise unavailable in the United States; industrial trainees, conditional entries[13] and parolees[14]; and an "other" group, such as visitors and foreign government officials.

In fiscal year 1965—before the effect of the October 1965 revisions—less than 600 of the 5,300 immigrant scientists and engineers were former nonimmigrant visa holders. In the next year the change-of-status group accounted for most of the increase (1,700 of 1,900) in scientist-engineer immigrants. The number of changes to immigrant status increased even more in succeeding years, totaling 5,500 by 1970. Thus, in that year they accounted for 61 percent of the increase in immigrant scientists and engineers in 1970 over 1965.

Another aspect of the greatly expanded number of change-of-status immigrants between 1966 and 1970 was the length of stay prior to acquiring permanent status. Nearly 70 percent of the 20,500 change-of-status scientists and engineers during the 1966–70 period had entered the United States prior to fiscal year 1966, the year the 1965 revisions of the immigration law became effective.[15] The nonimmigrant group residing in the United States was thus an important source of immigrant scientists and engineers, when they became eligible to receive immigrant visas under the October 1965 revisions.



[13] The very small number of conditional entries discussed in this section are actually neither immigrants nor nonimmigrants, but are included in current year immigration data for statistical purposes.

[14] Technically, parolees are not nonimmigrants. However, since the very minimal numbers of parolees in each year's total of immigrant scientists and engineers had changed to immigrant status that year, they are included in the discussion in this section.

[15] For data prior to 1968 see National Science Foundation, *Scientists, Engineers, and Physicians From Abroad, Fiscal Years 1966 and 1967* (NSF 69–10) (Washington, D.C. 20402: Supt. of Documents, U.S. Government Printing Office), 1969.

rant Status

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1965 revisions of the National Immigration
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dustrial trainees, conditional entries[13] and
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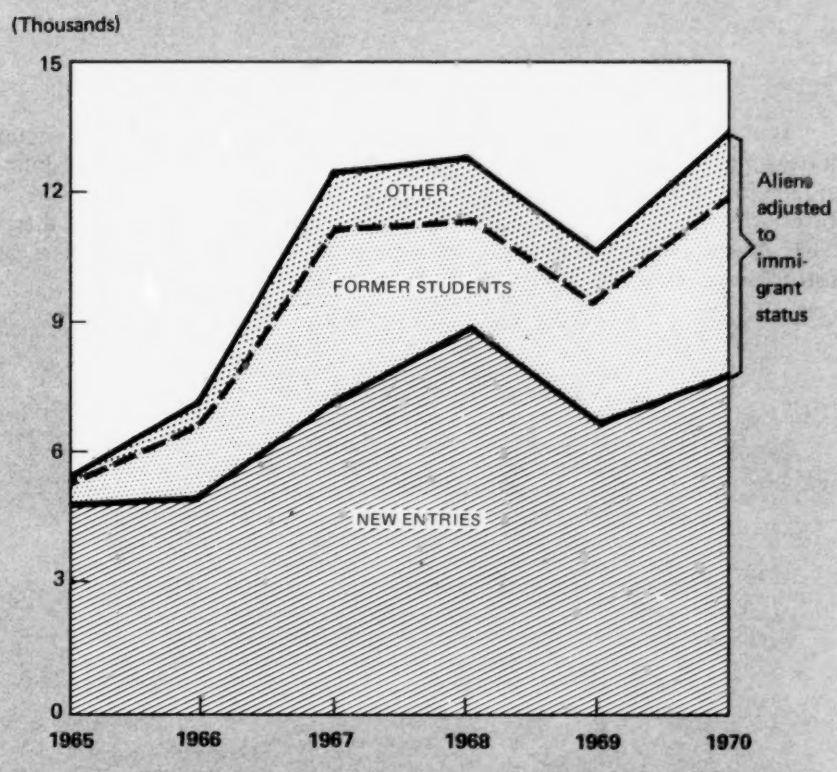
Immigrant scientists and engineers as new entries and alien residents changing status, FY 1965-70



SOURCE: National Science Foundation, from data of the Immigration and Naturalization Service, U. S. Department of Justice.

Scientists, engineers, physicians, and surgeons who changed from nonimmigrant status to immigrant status in fiscal year 1970, by year of nonimmigrant entry and by occupational group

Year of nonimmigrant entry	Scientists and engineers			Physicians and surgeons
	Total	Engineers	Scientists	
Adjusted to immigrant	5,470	3,636	1,834	890
Year of entry:				
Before 1960	105	50	55	50
1960–64	1,250	718	532	362
1965	637	383	254	72
1966	890	638	252	84
1967	1,107	839	268	103
1968	985	677	308	132
1969	456	300	156	86
1970	40	31	9	1

Source: National Science Foundation, based on data of the Immigration and Naturalization Service, U.S. Department of Justice.

Scientists, engineers, physicians, and surgeons adjusted to immigrant status, by status at entry and by country or region of birth, fiscal year 1970

Occupation and status	All countries	Europe	Asia	North & Central America	South America	Africa	All others
Scientists and engineers	13,337	2,908	8,294	655	236	1,107	137
Adjustment of status	5,470	807	4,382	45	1	189	46
As percent of total	41.0	27.8	52.8	6.9	.4	17.1	33.6
Engineers	9,305	2,000	5,990	387	158	702	68
Adjustment of status	3,636	558	2,936	20	1	99	22
As percent of total	39.1	27.9	49.0	5.2	.6	14.1	32.4
Natural scientists	3,264	702	1,899	193	57	352	61
Adjustment of status	1,463	192	1,172	18	—	59	22
As percent of total	44.8	27.4	61.7	9.3	—	16.8	36.1
Social scientists	768	206	405	75	21	53	8
Adjustment of status	371	57	274	7	—	31	2
As percent of total	48.3	27.7	67.7	9.3	—	58.5	25.0
Physicians and surgeons	3,155	550	1,942	236	148	254	25
Adjustment of status	890	126	679	43	—	39	3
As percent of total	28.2	22.9	35.0	18.2	—	15.4	12.0

Note: Data include professors and instructors.

Source: National Science Foundation, based on data of the Immigration and Naturalization Service, U.S. Department of Justice.

The bulk of the change-of-status scien
as in previous years were Asian. Asians nu
to 4,400 in 1970. Former nonimmigrants f
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of well over 90 percent of change-of-statu
regions, students were by far the large
immigrants.

About 6 percent of the 2,000 immigra
visas when they acquired permanent resid
had increased to 28 percent, with 890 o
Nearly 75 percent of the former nonim
originally entered the United States before

Asia accounted for by far the largest
physicians with 80 percent in 1969 and 7
was the largest of the nonimmigrant cate
47 percent or more of the former nonimm

geons who changed from nonimmigrant status to of nonimmigrant entry and by occupational group

	Scientists and engineers		Physicians and surgeons
	Engineers	Scientists	
	3,636	1,834	890
	50	55	50
	718	532	362
	383	254	72
	638	252	84
	839	268	103
	677	308	132
	300	156	86
	31	9	1

ata of the Immigration and Naturalization Service.

nd surgeons adjusted to immigrant status, try or region of birth, fiscal year 1970

e	Asia	North & Central America	South America	Africa	All others
	8,294	655	236	1,107	137
	4,382	45	1	189	46
	52.8	6.9	.4	17.1	33.6
	5,990	387	158	702	68
	2,936	20	1	99	22
	49.0	5.2	.6	14.1	32.4
	1,899	193	57	352	61
	1,172	18	—	59	22
	61.7	9.3	—	16.8	36.1
	405	75	21	53	8
	274	7	—	31	2
	67.7	9.3	—	58.5	25.0
	1,942	236	148	254	25
	679	43	—	39	3
	35.0	18.2	—	15.4	12.0

ata of the Immigration and Naturalization Service.

The bulk of the change-of-status scientists and engineers in 1969 and 1970 as in previous years were Asian. Asians numbered 2,900 in 1969, and increased to 4,400 in 1970. Former nonimmigrants from Europe numbered 470 in 1969, and then advanced to 810 in 1970. The two regions combined were the source of well over 90 percent of change-of-status scientists and engineers. For both regions, students were by far the largest of the groups of former non-immigrants.

About 6 percent of the 2,000 immigrant physicians in 1965 had temporary visas when they acquired permanent residence status. By 1970 the proportion had increased to 28 percent, with 890 of the 3,200 being change-of-status. Nearly 75 percent of the former nonimmigrant physicians since 1966 had originally entered the United States before that year.

Asia accounted for by far the largest proportion of the change-of-status physicians with 80 percent in 1969 and 76 percent in 1970. Exchange visitor was the largest of the nonimmigrant categories over the period, representing 47 percent or more of the former nonimmigrant physicians in all years.

Demographic Characteristics

AGE AND SEX

Male scientists and engineers from abroad in 1970 numbered 12,100, a 32-percent increase over 1969. Female scientists and engineers meanwhile increased only 16 percent—to 1,200. Women scientists and engineers accordingly declined from 10 percent of all immigrant scientists and engineers in 1969 to 9 percent in 1970. In earlier years they had been a constant 7 to 8 percent of all immigrant scientists and engineers.

Women are a much larger propo
neers than of total scientists and engi
In the United States, less than 10 perce
cent of the engineers are women.[16] An
make up about 22 percent of the s
engineers.

[16] Proportion of women scientists and engi
Technical Personnel, 1969 and 1970.

Scientists, engineers, and physicians and surgeons admitted to the United States as immigrants, by broad occupation, region of last permanent res

Occupation and sex	1969									
	All regions	Europe	Asia	North and Central America	South America	Africa	All other	All regions	Europe	Asia
Scientists and engineers	10,255	2,613	4,905	1,560	413	646	118	13,337	2,779	7,454
Male	9,194	2,380	4,278	1,447	363	614	112	12,104	2,537	6,697
Female	1,061	233	627	113	50	32	6	1,233	242	757
Natural scientists	2,061	631	1,282	379	83	182	44	3,264	680	1,687
Male	1,971	513	867	326	55	171	39	2,575	568	1,216
Female	630	118	415	53	28	11	5	689	112	471
Social scientists	504	146	174	93	56	27	8	768	196	381
Male	378	102	141	63	42	22	8	570	140	285
Female	126	44	33	30	14	5	—	198	56	96
Engineers	7,150	1,836	3,449	1,088	274	437	66	9,305	1,903	5,386
Male	6,845	1,765	3,270	1,058	266	421	65	8,959	1,829	5,196
Female	305	71	179	30	8	16	1	346	74	190
Physicians and surgeons	2,756	579	1,435	415	172	137	18	3,155	643	1,726
Male	1,956	413	940	332	141	120	10	2,362	486	1,211
Female	800	166	495	83	31	17	8	793	157	515

Note: Data include professors and instructors.

Source: National Science Foundation, based on data of the Immigration and Naturalization Service, U.S. Department of Justice.

ics

from abroad in 1970 numbered 12,100, a male scientists and engineers meanwhile 0. Women scientists and engineers accord- all immigrant scientists and engineers in er years they had been a constant 7 to 8 d engineers.

Women are a much larger proportion of immigrant scientists and engineers than of total scientists and engineers in the U.S. domestic labor force. In the United States, less than 10 percent of the scientists and less than 1 percent of the engineers are women.[16] Among the immigrants, however, women make up about 22 percent of the scientists and about 4 percent of the engineers.

[16] Proportion of women scientists and engineers is from National Register of Scientific and Technical Personnel, 1969 and 1970.

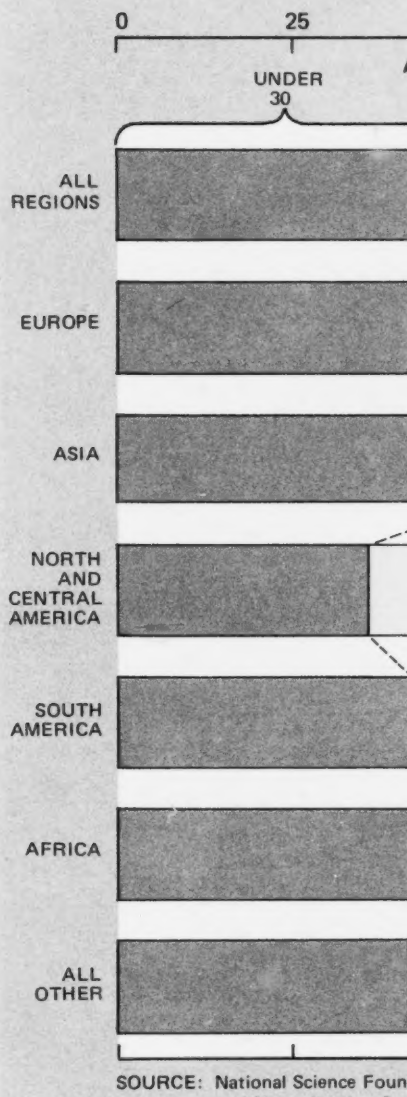
nd surgeons admitted to the United States as immigrants, by broad occupation, region of last permanent residence, and sex, fiscal years 1969 and 1970

	1969							1970					
ons	Europe	Asia	North and Central America	South America	Africa	All other	All regions	Europe	Asia	North and Central America	South America	Africa	All other
55	2,613	4,905	1,560	413	646	118	13,337	2,779	7,454	1,620	310	1,024	150
94	2,380	4,278	1,447	363	614	112	12,104	2,537	6,697	1,515	279	942	134
61	233	627	113	50	32	6	1,233	242	757	105	31	82	16
61	631	1,282	379	83	182	44	3,264	680	1,687	427	77	322	71
71	513	867	326	55	171	39	2,575	568	1,216	379	59	293	60
30	118	415	53	28	11	5	689	112	471	48	18	29	11
04	146	174	93	56	27	8	768	196	381	110	25	47	9
78	102	141	63	42	22	8	570	140	285	81	16	41	7
26	44	33	30	14	5	—	198	56	96	29	9	6	2
50	1,836	3,449	1,088	274	437	66	9,305	1,903	5,386	1,083	208	655	70
45	1,765	3,270	1,058	266	421	65	8,959	1,829	5,196	1,055	204	608	67
05	71	179	30	8	16	1	346	74	190	28	4	47	3
56	579	1,435	415	172	137	18	3,155	643	1,726	412	160	188	26
56	413	940	332	141	120	10	2,362	486	1,211	340	142	160	23
00	166	495	83	31	17	8	793	157	515	72	18	28	3

ta of the Immigration and Naturalization Service, U.S. Department of Justice.

In 1970 nearly one-half—49 percent—of the immigrant scientists and engineers were under 30 years of age, and another 46 percent were 30 to 44 years of age (appendix table B–5). The youngest immigrants came from Asia and Africa, which together accounted for 64 percent of the total inflow in 1970. Of the Asians, 54 percent were under 30, as were 52 percent of the Africans. In comparison, only 43 percent of the European and South American, and 37 percent of the North and Central American immigrants were under 30.

Distribution of scientists and eng
as immigrants, by region o
FY



SOURCE: National Science Foun
and Naturalization Ser

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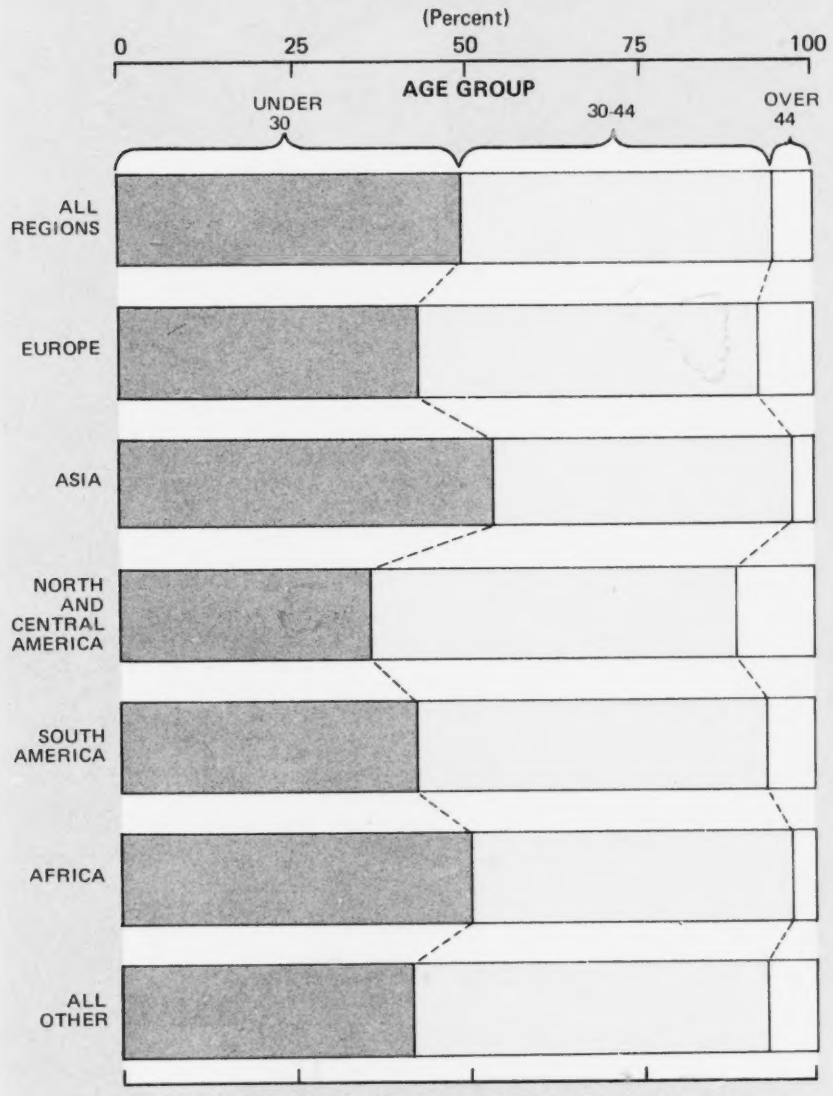
Distribution of scientists and engineers admitted to the United States as immigrants, by region of last residence and age group FY 1970



SOURCE: National Science Foundation, from data of the Immigration and Naturalization Service, U.S. Department of Justice.

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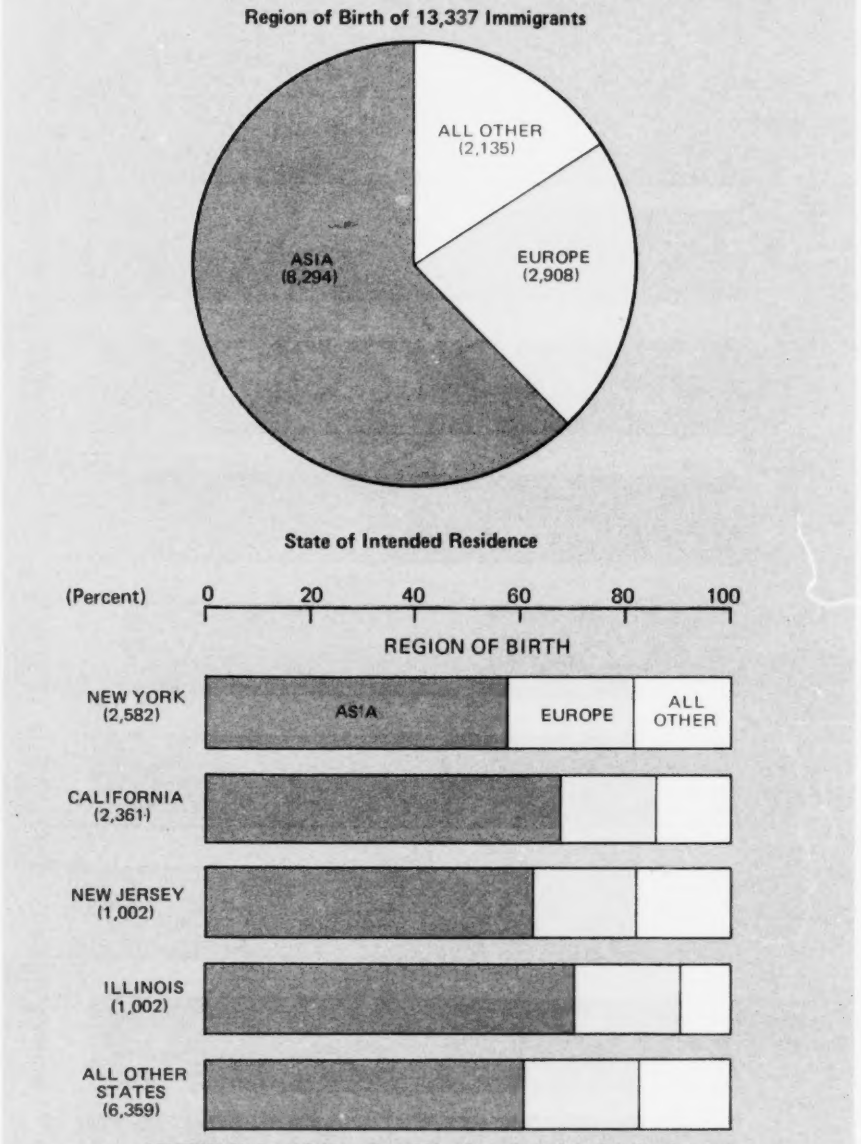
he youngest immigrants came from Asia
ed for 64 percent of the total inflow in
re under 30, as were 52 percent of the
ent of the European and South American,
tral American immigrants were under 30.

Region of birth and State of intended residence of scientists and engineers admitted to the United States as immigrants, FY 1970

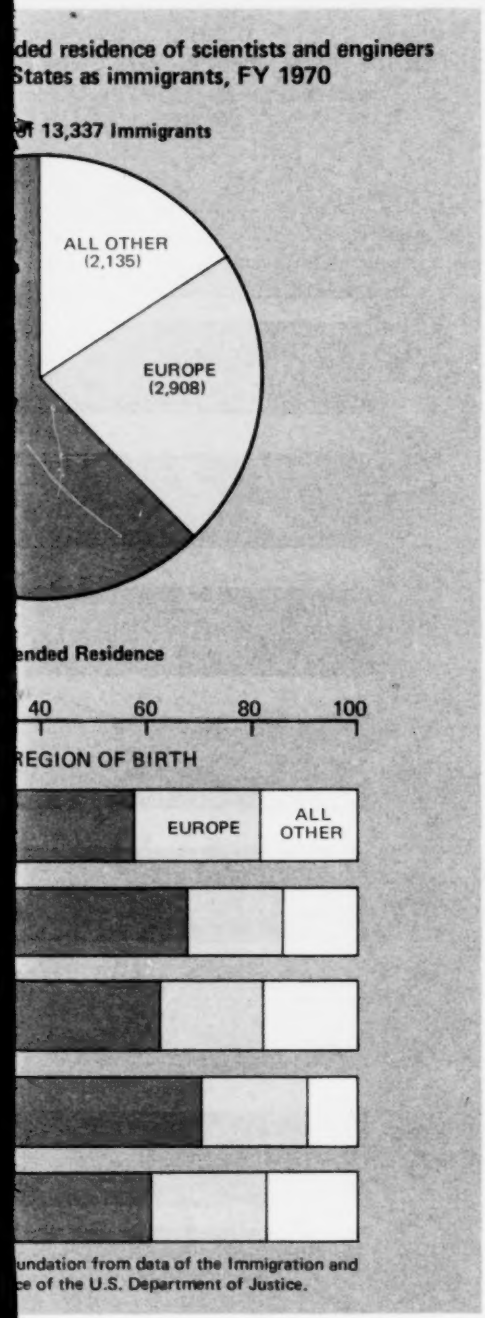


SOURCE: National Science Foundation from data of the Immigration and Naturalization Service of the U.S. Department of Justice.

STATE OF INTENDED RESIDENCE

Of the 13,300 immigrant scie
52 percent—planned to reside i
New Jersey and Illinois (1,000
Asian-born scientists and enginee
these four States; as did 50 percen

Immigrant physicians in 197
New Jersey, and Illinois at nearly
Among the 1,500 physicians goin
290 Europeans.



STATE OF INTENDED RESIDENCE

Of the 13,300 immigrant scientists and engineers in 1970, over one-half—52 percent—planned to reside in New York (2,600), California (2,400), and New Jersey and Illinois (1,000 each) (appendix table B–6). Of the 8,300 Asian-born scientists and engineers in 1970, 54 percent planned to reside in these four States; as did 50 percent of the 2,900 Europeans.

Immigrant physicians in 1970 planned to go to New York, California, New Jersey, and Illinois at nearly the same rate as the scientists and engineers. Among the 1,500 physicians going to these four States were 900 Asians and 290 Europeans.

Part II
NONIMMIGRANTS

Trends in Nonimmigrant
Engineers, and Physcians

The "nonimmigrant" [1] compo
is important for several reasons. A
and physicians residing in the Uni
countries of origin, those who d
substantial proportion of total in
immigrant scientists and enginee
nonimmigrants (part I). In additio
only a short term provide some i
power resources. In return, thes
knowledge of the scientific comm
pating. They thus enrich their ov
benefit scientific and technologica

Foreign scholars and studen
nonimmigrants. Aspects of educat
below.

In fiscal year 1970 nonimm
6,100, compared with 5,300 to 5,6
table B–7). By far the largest ca
period were the 4,000 to 4,300
industrial trainees, the 580 temp
ability, and the 340 temporary wo
United States in 1970, compare v
100 to 300 yearly in the preceedi
include professors and instructo
Between 1965 and 1970 from 770
were exchange visitors.

Nonimmigrant physicians tot
between 1965 and 1968 they ha
these physicians, 93 to 96 perce
table B–8).

Europe, North and Central A
increased numbers of nonimmigra
period, reflecting an increasing in
Canada, and Chile. Those from C

[1] Includes exchange visitors, industri
and ability, and temporary workers perfo
nonimmigrant class of entry codes are: J–

Trends in Nonimmigrant Scientists, Engineers, and Physcians

The "nonimmigrant"[1] component of manpower in U.S. scientific activities is important for several reasons. Although the majority of scientists, engineers, and physicians residing in the United States on temporary visas return to their countries of origin, those who do not, and become immigrants, make up a substantial proportion of total immigrants. For example, 41 percent of the immigrant scientists and engineers in 1970 had entered the United States as nonimmigrants (part I). In addition, those who stay in the United States for only a short term provide some increment, however limited, to current manpower resources. In return, these visitors draw upon the techniques and knowledge of the scientific community in which they are temporarily participating. They thus enrich their own scientific experience, which in turn may benefit scientific and technological progress in their home country.

Foreign scholars and students are an important part of the inflow of nonimmigrants. Aspects of educational exchange, therefore, are also examined below.

In fiscal year 1970 nonimmigrant scientists and engineers numbered 6,100, compared with 5,300 to 5,600 yearly in the preceeding 5 years (appendix table B–7). By far the largest category of nonimmigrants over the 1965–70 period were the 4,000 to 4,300 new exchange visitors each year. The 910 industrial trainees, the 580 temporary workers of distinguished merit and ability, and the 340 temporary workers performing services unavailable in the United States in 1970, compare with inflows of 500 to 800, 400 to 500, and 100 to 300 yearly in the preceeding 5 years. These four nonimmigrant groups include professors and instructors, most of whom are exchange visitors. Between 1965 and 1970 from 770 to 920 professors and instructors each year were exchange visitors.

Nonimmigrant physicians totaled 5,400 in 1970 and 4,800 in 1969; while between 1965 and 1968 they had increased from 4,100 to 6,000 yearly. Of these physicians, 93 to 96 percent yearly were exchange visitors (appendix table B–8).

Europe, North and Central America, and South America accounted for increased numbers of nonimmigrant scientists and engineers over the 1965–70 period, reflecting an increasing influx from Germany and the United Kingdom, Canada, and Chile. Those from Germany and the United Kingdom increased

[1] Includes exchange visitors, industrial trainees, temporary workers of distinguished merit and ability, and temporary workers performing services unavailable in the United States. Their nonimmigrant class of entry codes are: J–1, H–1, H–2, and H–3.

from 280 and 500, respectively, to 500 and 800; those from Canada increased from 500 to 800, and those from Chile, from 30 to 280. All of the Chilean increase occurred in 1970. The nonimmigrant physician and surgeon inflows from these regions and countries followed the scientist and engineer change pattern.

Scientists and engineers admitted to the United States as nonimmigrants, by category and region of last permanent residence,[a] fiscal years 1965[b]–70

Nonimmigrant category	Region of last permanent residence						
	All regions	Europe	Asia	North and Central America	South America	Africa	All other areas
				1970			
Total nonimmigrants	6,050	2,701	1,259	1,049	671	183	187
Exchange visitors	4,228	1,982	907	412	605	166	156
Other nonimmigrants[c]	1,822	719	352	637	66	17	31
				1969			
Total nonimmigrants	5,362	2,446	1,313	788	460	182	173
Exchange visitors	3,975	1,787	1,175	342	379	163	129
Other nonimmigrants[c]	1,387	659	138	446	81	19	44
				1968			
Total nonimmigrants	5,633	2,591	1,568	707	395	185	187
Exchange visitors	4,130	1,839	1,258	367	347	180	139
Other nonimmigrants[c]	1,503	752	310	340	48	5	48
				1967			
Total nonimmigrants	5,379	2,494	1,350	697	424	244	170
Exchange visitors	4,141	1,820	1,210	383	360	235	133
Other nonimmigrants[c]	1,238	674	140	314	64	9	37
				1966			
Total nonimmigrants	5,457	2,291	1,451	673	457	[d]	585[d]
Exchange visitors	4,335	1,859	1,164	364	412	[d]	536[d]
Other nonimmigrants[c]	1,122	432	287	309	45	—	49
				1965			
Total nonimmigrants	5,323	2,133	1,458	770	440	348	174
Exchange visitors	4,214	1,677	1,294	379	390	327	147
Other nonimmigrants[c]	1,109	456	164	391	50	21	27

[a] One year or more.

[b] Although data for 1965 are available only on a calendar year basis, they appear to be largely consistent with what fiscal year data could be expected to show.

[c] Includes temporary workers of distinguished merit and ability, temporary workers performing services unavailable in the United States, and industrial trainees.

[d] Data for Africa, not separately available, included with all other areas.

Source: National Science Foundation, from data of the Immigration and Naturalization Service, U.S. Department of Justice.

Scientists and engineers
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**Physicians and surgeons admi
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Nonimmigrant category	All regions
Total nonimmigrants	5,365
Exchange visitors	5,008
Other nonimmigrants[c]	357
Total nonimmigrants	4,759
Exchange visitors	4,460
Other nonimmigrants[c]	299
Total nonimmigrants	5,997
Exchange visitors	5,701
Other nonimmigrants[c]	296
Total nonimmigrants	5,631
Exchange visitors	5,264
Other nonimmigrants[c]	367
Total nonimmigrants	4,553
Exchange visitors	4,370
Other nonimmigrants[c]	183
Total nonimmigrants	4,114
Exchange visitors	3,904
Other nonimmigrants[c]	240

[a] One year or more.

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Source: National Science Foundation,
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Region	Europe
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immigrant physician and surgeon inflows
llowed the scientist and engineer change

e United States as nonimmigrants, by category
nt residence,[a] fiscal years 1965[b]–70

Region of last permanent residence					
e	Asia	North and Central America	South America	Africa	All other areas
		1970			
	1,259	1,049	671	183	187
2	907	412	605	166	156
2	352	637	66	17	31
		1969			
	1,313	788	460	182	173
	1,175	342	379	163	129
	138	446	81	19	44
		1968			
	1,568	707	395	185	187
	1,258	367	347	180	139
	310	340	48	5	48
		1967			
	1,350	697	424	244	170
	1,210	383	360	235	133
	140	314	64	9	37
		1966			
	1,451	673	457	[d]	585[d]
	1,164	364	412	[d]	536[d]
	287	309	45	—	49
		1965			
	1,458	770	440	348	174
	1,294	379	390	327	147
	164	391	50	21	27

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Scientists and engineers from Asia decreased from 1,500 in 1965 to 1,300 in 1970, with all countries except Japan and Taiwan sending fewer nonimmigrants. Japanese nonimmigrant scientists and engineers advanced from 410 in 1965 to 480 in 1970. The physician inflow from Asia advanced from 2,200 in 1965 to 3,300 in 1968, and then dropped to 2,300 in 1970.

Physicians and surgeons admitted to the United States as nonimmigrants, by category and region of last permanent residence,[a] fiscal years 1965[b]–70

Nonimmigrant category	Region of last permanent residence						
	All regions	Europe	Asia	North and Central America	South America	Africa	All other areas
				1970			
Total nonimmigrants	5,365	1,498	2,308	838	451	150	120
Exchange visitors	5,008	1,235	2,294	784	443	138	114
Other nonimmigrants[c]	357	263	14	54	8	12	6
				1969			
Total nonimmigrants	4,759	1,261	2,216	684	363	119	116
Exchange visitors	4,460	1,029	2,191	652	360	115	113
Other nonimmigrants[c]	299	232	25	32	3	4	3
				1968			
Total nonimmigrants	5,997	1,424	3,286	708	370	126	83
Exchange visitors	5,701	1,176	3,268	684	367	125	81
Other nonimmigrants[c]	296	248	18	24	3	1	2
				1967			
Total nonimmigrants	5,631	1,509	3,079	605	208	101	129
Exchange visitors	5,264	1,234	3,067	532	204	100	127
Other nonimmigrants[c]	367	275	12	73	4	1	2
				1966			
Total nonimmigrants	4,553	1,008	2,567	588	212	[d]	178[d]
Exchange visitors	4,370	896	2,543	546	211	[d]	174[d]
Other nonimmigrants[c]	183	112	24	42	1	[d]	4[d]
				1965			
Total nonimmigrants	4,114	994	2,171	564	182	84	119
Exchange visitors	3,904	849	2,154	523	181	81	116
Other nonimmigrants[c]	210	145	17	41	1	3	3

[a] One year or more.

[b] Although data for 1965 are available only on a calendar year basis, they appear to be largely consistent with what fiscal year data could be expected to show.

[c] Includes temporary workers of distinguished merit and ability, temporary workers performing services unavailable in the United States, and industrial trainees.

[d] Data for Africa, not separately available, included with all other areas.

Source: National Science Foundation, from data of the Immigration and Naturalization Service, U.S. Department of Justice.

Part III

EDUCATIONAL EXCHANGE OF FOREIGN STUDENTS AND SCHOLARS

Trends in Foreign

Foreign students of
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[1] In this part the student
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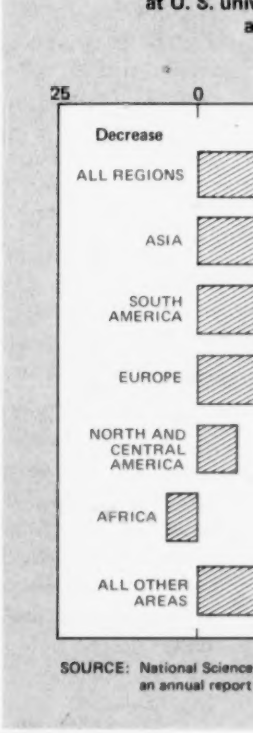

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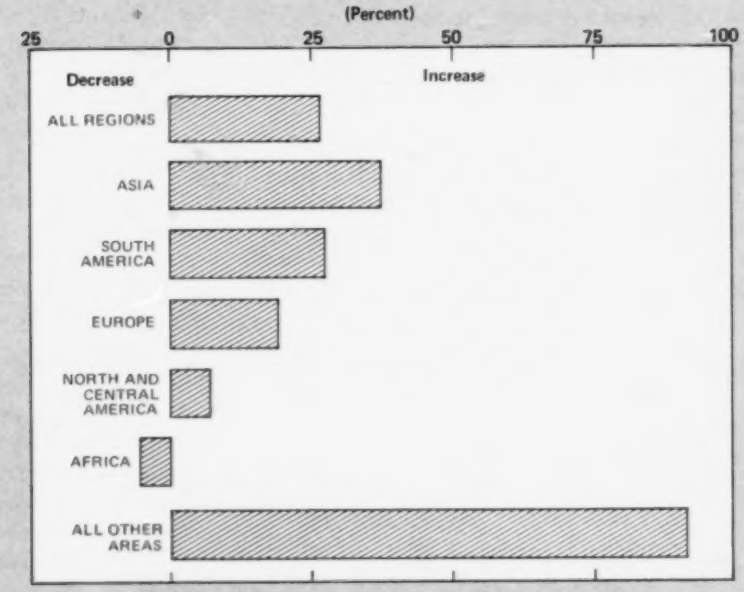
Trends in Foreign Students

Foreign students of science and engineering in the United States numbered 72,100 in 1970,[1] 27 percent above the 56,800 in 1967[2] (appendix table B–9). Asian students rose 38 percent between 1967 and 1970. Smaller increases occurred among the South American, European, and North and Central American students. All Asian nations contributed to the region's increased total of students, with the large Chinese and Indian groups rising from roughly 6,000 each in 1967 to 8,900 by 1970. The 21-percent advance in those from the United Kingdom typified the change pattern for most European countries. All South American countries contributed to the increased numbers. Students from Canada, roughly one-half of the North and Central American total, increased 3 percent between 1967 and 1970.

[1] In this part the student data relate to academic years, which coincide with fiscal year data. [2] Comparable data unavailable for prior years.

Percent change in foreign students of science and engineering at U. S. universities and colleges, by region of citizenship, academic years 1966-70 to 1969-70



SOURCE: National Science Foundation, based on data from OPEN DOORS, 1967 and 1970, an annual report of the Institute of International Education.

As the largest group of foreign nationals in the United States qualified as scientists and engineers, graduating foreign students account for the largest numbers of change-of-status scientists and engineers. Even so, foreign students who change status are only a small portion of the total of foreign students of science and engineering in the United States.

Over the years 1967 through 1970 there was an average of 64,100 foreign students of science and engineering in the United States of whom 3,400, or 5 percent, yearly became immigrants. In comparison, 4,100 scientists and engineers yearly entered the United States as exchange visitors in this period, of which about 130 or 3 percent yearly changed to immigrant status. (Comparable data are lacking for the small group of "all other" nonimmigrant scientists and engineers who changed status.)

The following tabulation shows foreign medical students in U.S. universities and colleges[3] numbered 2,000 in 1967 and 2,100 in 1970, markedly fewer than their science and engineering counterparts. Each year about 80 medical students change to immigrant status after receiving their medical degree. This is about 4 percent of the number of foreign medical students in the United States at any time. Comparative data for exchange visitor physicians show an average of 5,100 new entrants per year over the 4-year period. Those who changed status numbered 390 yearly, only about 8 percent as many as in the yearly inflow of exchange visitor physicians.

Region of citizenship	Academic year 1966–67	1969–70
All regions	1,981	2,135
Europe	271	269
North and Central America	488	566
South America	186	145
Asia	800	835
Africa	187	193
All other areas	49	127

Note: Data include medicine and premedicine students.

Among the 72,100 students of science and engineering in the United States in 1970 were 29,700 in engineering, 25,100 in the natural sciences, and 17,300 in the social sciences—41 percent, 35 percent, and 24 percent, respectively, of the total. This was approximately the same proportionate division as in 1967 when the 56,800 students included 21,600 engineers, 20,300 natural scientists, and 14,900 social scientists.

Of the foreign students of science and engineering in the United States, overall, about 55 percent were graduate students over the academic years 1967 through 1970. The percentage varied considerably by region of citizenship.[4]

About 62 percent of the Asian and European students of science and engineering over the 4-year period were graduate students as were 37 percent of those from North and Central America. South American and African graduate students, however, advanced from 44 percent and 45 percent, respectively, of their regional totals in 1967 to 49 percent and 55 percent, respectively, by 1970.

[3] Excludes interns.

[4] Comparable data are unavailable for medical students.

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[4] Comparable data are unavailable for medical students.

Foreign graduate and undergraduate students of science and engineering[a] in American universities and colleges, by region of citizenship, academic years 1966–67 and 1969–70

Region of citizenship	Academic year	
	1966–67	1969–70
All regions	54,905	68,743
Graduate	29,945	38,758
Undergraduate	24,960	29,985
Europe	7,149	8,455
Graduate	4,321	5,313
Undergraduate	2,828	3,142
North and Central America	9,783	10,312
Graduate	3,585	3,821
Undergraduate	6,198	6,491
South America	4,193	5,257
Graduate	1,846	2,597
Undergraduate	2,347	2,660
Asia	28,477	38,850
Graduate	17,659	23,956
Undergraduate	10,818	14,894
Africa	4,401	4,13[illegible]
Graduate	1,979	2,278
Undergraduate	2,422	1,861
All other areas	902	1,730
Graduate	555	793
Undergraduate	347	937

[a] Includes agriculture, physical, life, and social sciences and engineering.

Note: Includes only students whose status was known.

Source: Based on data from *Open Doors*, an annual publication of the Institute of International Exchange.

Foreign Recipients of U.S. Doctorates

In addition to the data already presented on foreign graduate students of science and engineering in American universities and colleges, data are also available on the numbers of foreign citizens who received their doctorate in science or engineering in the United States. Foreign recipients of science and engineering doctorates from U.S. universities and colleges grew 222 percent between 1960 and 1970, from 1,000 to 3,300. All received their secondary education and baccalaureate degree abroad except 180 Ph.D. recipients in 1960, and 390 in 1970 who had received their baccalaureate in the United States. U.S. citizen recipients of doctorates from American universities and colleges advanced from 5,100 to 14,300—or 182 percent—over the same period. This is a noticeably smaller growth rate than the 222 percent among the foreign recipients.[5] The foreign recipient group thus accounted for 16 percent of the total doctorate recipients in 1960, and 19 percent in 1970.

All geographic regions of the world contributed to the increase in foreign recipients of doctorates of science and engineering from American universities and colleges. Those from Asia grew from 44 percent to 49 percent of the total. China and India accounted for about 70 percent of this rise. The European doctorate recipients also grew numerically larger, but remained at about 12 percent of the total in both years. The largest group from Europe in 1970 came from the United Kingdom—about 20 percent. Doctorate recipients from North and Central America more than doubled to 780 in 1970, while the proportion dropped from 33 percent of the total to 23 percent; the great bulk were from Canada.

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[5] Based on data from the Office of Education, U.S. Department of Health, Education, and Welfare, and from the National Academy of Sciences-National Research Council.

**Foreign recipients[a] of doctorates of science and engineering fr
to work in the United States and elsewhere, by region of ba**

World region of baccalaureate	World region of first po			
	1960			
	Total	United States	Foreign	Unknown
All regions	1,034	426	431	177
Europe	128	59	46	23
Western	115	54	41	20
Eastern	13	5	5	3
Asia	457	204	163	90
North and Central America	337	138	144	55
United States	175	98	41	36
Other	162	40	103	19
South America	20	8	12	—
Africa	36	7	24	5
All other regions	56	10	42	4

[a] Based on citizenship.

Source: National Science Foundation, from data of the National Academy of Sciences—National Research Council.

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Among the 2,600 foreign scientists and engineers who received their doctorate in the United States in 1970 and whose employment plans were known, were 1,500 nonimmigrants who planned to work in the United States. Another 1,100 planned to pursue activities outside the United States. In 1960 these groups had numbered 430 each. Those intending to remain in the United States thus grew from 50 percent of those whose plans were known, to 59 percent.

Foreign recipients[a] of doctorates of science and engineering from U.S. universities intending to work in the United States and elsewhere, by region of baccalaureate, 1960 and 1970

World region of baccalaureate	World region of first postdoctoral employment							
	1960				1970			
	Total	United States	Foreign	Unknown	Total	United States	Foreign	Unknown
All regions	1,034	426	431	177	3,333	1,523	1,074	736
Europe	128	59	46	23	417	201	165	51
Western	115	54	41	20	356	161	154	41
Eastern	13	5	5	3	61	40	11	10
Asia	457	204	163	90	1,628	804	347	477
North and Central America	337	138	144	55	783	360	299	124
United States	175	98	41	36	386	219	82	85
Other	162	40	103	19	397	141	217	39
South America	20	8	12	—	142	28	98	16
Africa	36	7	24	5	205	71	82	52
All other regions	56	10	42	4	158	59	83	16

[a] Based on citizenship.

Source: National Science Foundation, from data of the National Academy of Sciences—National Research Council.

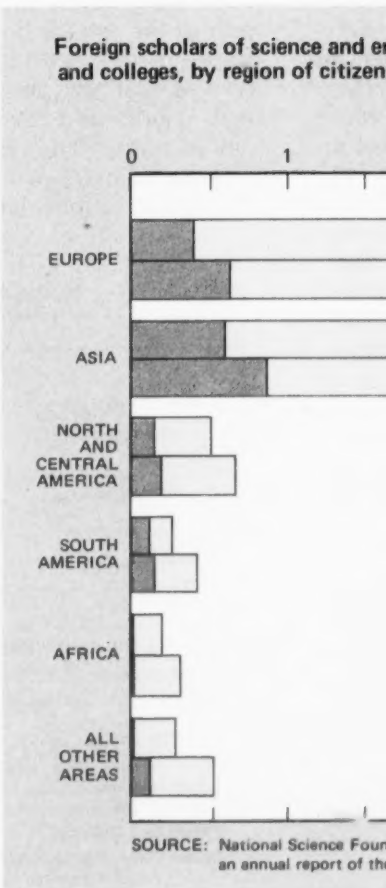
Foreign Scholars

In academic year 1969–70 the 9,900 foreign scholars of science and engineering in the United States[6] were up 37 percent from the 7,200 in 1964–65. The bulk of these nonimmigrant personnel are exchange visitors, who acquire nonimmigrant status under the U.S. Information and Educational Exchange Act of 1948. This Act provides for the interchange on a reciprocal basis between the United States and other countries of students, trainees, teachers, guest instructors, professors, and leaders in fields of specialized knowledge or skill, under programs approved by the Secretary of State. Until April 1970 such personnel could become immigrants only after they had resided outside the United States for 2 years. Since then this requirement can be waived if the Attorney General of the United States finds it would ". . . impose exceptional hardships upon the alien's spouse or child (if such spouse or child is a citizen of the United States or a lawfully resident alien) or that the alien cannot return to the country of his nationality or last residence because he would be subject to persecution on account of race, religion, or political opinion." [7] The requirement can also be waived if the foreign country of the alien's nationality or last residence states in writing it will not object to such waiver.

Foreign scholars in the natural, medical, and social sciences increased 30 percent, 40 percent, and 63 percent, respectively, over the 5-year period—from 4,300 to 5,600, from 1,400 to 2,000, and from 800 to 1,300. The smaller engineer group increased 47 percent—from nearly 700 to over 1,000 (appendix table B–10).

From 1965 to 1970, European foreign scholars increased by 44 percent to over 4,000 and the Asian scholars by 26 percent to 4,000. Among European foreign scholars in 1970 were 1,300 from the United Kingdom and 630 from Germany. Nearly three-fifths of the Asian total came from India and Japan—1,200 from each country.

Of the 690 foreign scholars from North and Central America in 1969–70, 500 were from Canada. There were 410 foreign scholars from South America (nearly one-third from Argentina) and 300 from Africa (well over two-fifths from the United Arab Republic).



[6] Data on foreign scholars in this report refer to the total number in the United States, rather than the yearly change in these numbers.

[7] Public Law 414, 82nd Congress, 2nd session (June 27, 1952) "Immigration and Nationality Act of 1952" as amended by Act of Apr. 7, 1970, Public Law 91–225, 91st Congress, 1st session.

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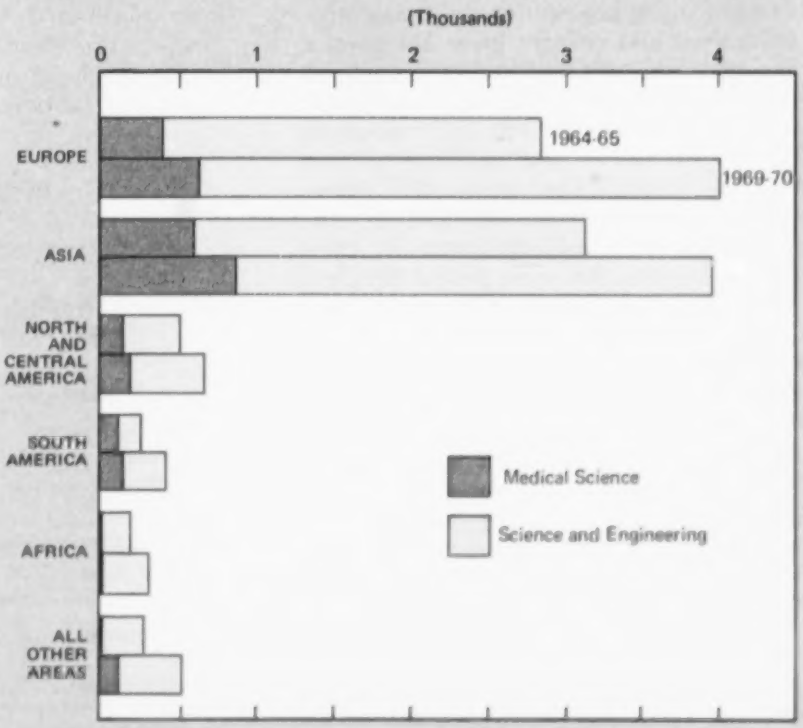
Foreign scholars of science and engineering and medicine at U.S. universities and colleges, by region of citizenship, academic years 1964-65 and 1969-70



SOURCE: National Science Foundation, based on data from OPEN DOORS, an annual report of the Institute of International Education.

Part IV

FOREIGN-BORN SCIENTISTS IN THE UNITED STATES[1]

[1] This part examines the "stock" of foreign scientists in the United States, whereas part I analyzes yearly inflows of immigrant scientists. As used here, the term "foreign scientists" refers to personnel who were both born abroad and received their secondary education abroad.

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Occupation and Degree

About 22,900, or 8 percent,
Scientific and Technical Person
received their secondary educat
Register totaled 270,000.[2] Nearly
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Of the 14,300 foreign-born
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[3] In the 1970 National Register of S
313,000 scientists. Of these, 32,900 we
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Occupation and Degree Level

N SCIENTISTS
STATES[1]

About 22,900, or 8 percent, of the scientists in the National Register of Scientific and Technical Personnel[2] in 1970 were both born abroad and received their secondary education abroad. American-born scientists in the Register totaled 270,000.[3] Nearly 63 percent of the foreign-born scientists held doctorates, whereas only 39 percent of the American-born scientists possessed doctorates.

Of the 14,300 foreign-born Ph.D. holders in the National Register, 56 percent were physical scientists. Virtually all of the nearly 1,100 with professional medical degrees were life scientists. Nearly 60 percent of the 5,000 master's degree holders were physical scientists; as were 80 percent of the 2,000 bachelor's degree scientists.

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tists. As used here, the term "foreign scientists" refers
and received their secondary education abroad.

[2] Data on scientists in this part cover physical, biological, and social sciences, and mathematics, and are the latest available data from the National Register of Scientific and Technical Personnel. The Register data are based on a biennial survey of scientists on the mailing lists of the various professional associations at the time of the survey; it does not represent a universe estimate of scientists in the United States.

[3] In the 1970 National Register of Scientific and Technical Personnel, there were a total of 313,000 scientists. Of these, 32,900 were foreign-born; 22,900 of whom also received their secondary education abroad. Another 10,000 registrants did not report place of birth.

Foreign-born scientists in the United States whose secondary graduation occurred abroad, by scientific field and region of secondary graduation, and by degree level, 1970

Scientific field	All regions	Europe	Asia	North and Central America	South America	Africa	All other areas[a]
				All degree levels			
Total	22,897	9,744	6,559	3,277	556	596	2,165
Physical sciences	12,870	5,691	3,770	1,661	287	269	1,192
Life sciences[b]	4,755	1,912	1,260	758	162	166	497
Mathematics	2,159	734	804	307	55	48	211
Social sciences	3,113	1,407	725	551	52	113	265
				Doctorate degrees			
Total	14,322	6,401	4,063	2,021	255	369	1,213
Physical sciences	7,997	3,839	2,218	1,036	131	166	607
Life sciences	3,020	1,108	918	481	79	116	318
Mathematics	1,237	450	483	147	16	21	120
Social sciences	2,068	1,004	444	357	29	66	168
				Professional and medical degrees			
Total	1,100	617	160	145	68	28	82
Physical sciences	19	10	4	1	1	2	1
Life sciences	1,075	602	156	143	67	26	81
Mathematics	1	1	—	—	—	—	—
Social sciences	5	4	—	1	—	—	—
				Master's degrees			
Total	4,983	1,603	1,898	640	132	144	566
Physical sciences	2,931	974	1,175	312	80	60	330
Life sciences	461	115	154	94	7	20	71
Mathematics	703	200	304	69	27	21	82
Social sciences	888	314	265	165	18	43	83
				Bachelor's degrees			
Total	1,995	746	417	445	65	53	269
Physical sciences	1,592	612	360	297	53	39	231
Life sciences	128	40	27	34	5	4	18
Mathematics	180	56	17	87	5	6	9
Social sciences	95	38	13	27	2	4	11
				Nondegree scientists			
Total	9	6	—	—	1	—	2
Physical sciences	8	5	—	—	1	—	2
Life sciences	1	1	—	—	—	—	—
Mathematics	—	—	—	—	—	—	—
Social sciences	—	—	—	—	—	—	—
				Other scientists[c]			
Total	488	371	21	26	35	2	33
Physical sciences	323	251	13	15	21	2	21
Life sciences	70	46	5	6	4	—	9
Mathematics	38	27	—	4	7	—	—
Social sciences	57	47	3	1	3	—	3

[a] Includes a small number from countries in the specified world regions. [b] Includes professional medical scientists. [c] Includes those whose degree level is unknown. Source: National Register of Scientific and Technical Personnel, National Science Foundation.

Source Regions

Reflecting the pre-eminence of Europe as a source of foreign-born scientists in earlier years, the largest numbers of such personnel in the United States included in the Register in 1970 were the 9,700 from Europe. Other large numbers were the 6,600 from Asia and the 3,300 from North and Central America. Of the Europeans, 58 percent were physical scientists, as were 57 percent of the Asians and 51 percent of those from North and Central America. Nearly two-thirds of the Europeans held doctorates, as did over three-fifths of the Asians and North and Central Americans.

Work Activities

About 55 percent of the foreign-born scientists in the National Register in 1970 were primarily engaged in research and development, including R&D management. Another 21 percent were in teaching, 4 percent were in non-R&D management, and 20 percent in other activities. In comparison, among American-born scientists were these percentages: research and development, 40 percent; teaching, 24 percent; non-R&D management, 13 percent; and other activities, 24 percent.

Nearly one-half—48 percent—of the foreign-born physical scientists in 1970 were in research, as were 56 percent of the life scientists. Of the foreign-born mathematicians, the largest number—34 percent—were teachers; 31 percent were researchers. Teaching was also the largest category for foreign-born social scientists—42 percent of the total.

American- and foreign-born scientists whose seconda
by work activity and field of specializa

Work activity	American-born scien			
	Number	Percent distributio		
		Physical scien-tists	Life scien-tists	Math tici
All work activities	270,028	100.0	100.0	10
Management, total	61,396	22.0	28.4	2
R&D	25,937	11.0	9.1	
Other	35,459	11.0	19.3	1
Research, total	71,901	27.4	33.2	1
Basic	36,603	14.4	19.2	
Applied	35,298	13.0	13.9	1
Development	9,355	6.0	(a)	
Teaching	62,490	15.5	25.3	4
All other	64,886	29.1	13.2	1

[a] Less than .05 percent.

Note: Percent detail may not add to 100.0 because of rounding.

Source: National Register of Scientific and Technical Personnel, National Science Foundation.

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American- and foreign-born scientists whose secondary school graduation was in a foreign country, by work activity and field of specialization in the United States, 1970

Work activity	American-born scientists					Foreign-born scientists				
		Percent distribution					Percent distribution			
	Number	Physical scientists	Life scientists	Mathematicians	Social scientists	Number	Physical scientists	Life scientists	Mathematicians	Social scientists
All work activities	270,028	100.0	100.0	100.0	100.0	22,897	100.0	100.0	100.0	100.0
Management, total	61,396	22.0	28.4	20.1	19.2	2,795	13.5	10.0	12.4	10.2
R&D	25,937	11.0	9.1	7.8	6.8	1,845	9.7	6.7	5.8	5.0
Other	35,459	11.0	19.3	12.3	12.4	950	3.8	3.3	6.6	5.2
Research, total	71,901	27.4	33.2	17.4	21.0	10,146	48.5	55.8	30.5	19.1
Basic	36,603	14.4	19.2	7.3	7.1	7,053	32.4	44.5	20.1	10.8
Applied	35,298	13.0	13.9	10.1	13.9	3,093	16.1	11.3	10.4	8.4
Development	9,355	6.0	(a)	1.9	.9	646	4.7	—	1.3	.4
Teaching	62,490	15.5	25.3	41.4	33.9	4,687	14.9	15.4	34.4	41.7
All other	64,886	29.1	13.2	19.2	25.0	4,623	18.5	18.8	21.4	28.5

* Less than .05 percent.

Note: Percent detail may not add to 100.0 because of rounding.

Source: National Register of Scientific and Technical Personnel, National Science Foundation.

Employment

Universities and colleges employed over one-half—51 percent—of the foreign-born scientists in 1970. Another 27 percent worked in private industry or business. Among American-born scientists in the National Register, however, 41 percent and 31 percent, respectively, were employed in these sectors. The small proportion of foreign-born scientists in government reflects largely the fact that they ordinarily cannot work in this sector until they become U.S. citizens.

In 1970 the largest number of physical scientists from abroad were the 42 percent in colleges and universities, followed by private industry with 40 percent. The bulk of the life scientists, mathematicians, and social scientists were also in universities and colleges—63 percent, 60 percent, and 61 percent, respectively.

American- and foreign-born scientists in the United States, by selected employer category and field of specialization for foreign-born scientists, 1970

Employer category	American-born scientists	Foreign-born scientists				
		Total	Physical scientists	Life scientists	Mathematicians	Social scientists
Total	270,028	22,897	12,870	4,755	2,159	3,113
Private industry or business	83,750	6,159	5,092	371	514	182
Universities and colleges [a]	110,734	11,637	5,418	3,019	1,296	1,904
Federal Government	28,573	1,261	624	381	65	191
Nonprofit organizations	8,991	1,173	394	517	52	210
Other [b]	37,980	2,667	1,342	467	232	626

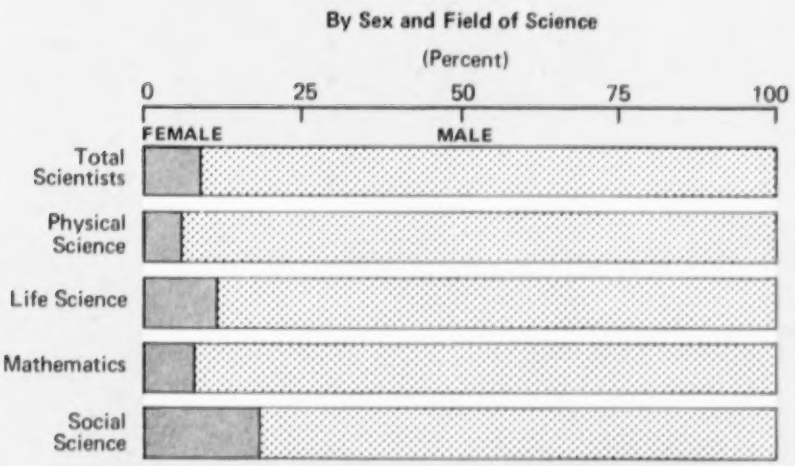
[a] Includes medical schools.

[b] Includes those not employed, those not reporting their employment category, and all others not elsewhere classified.

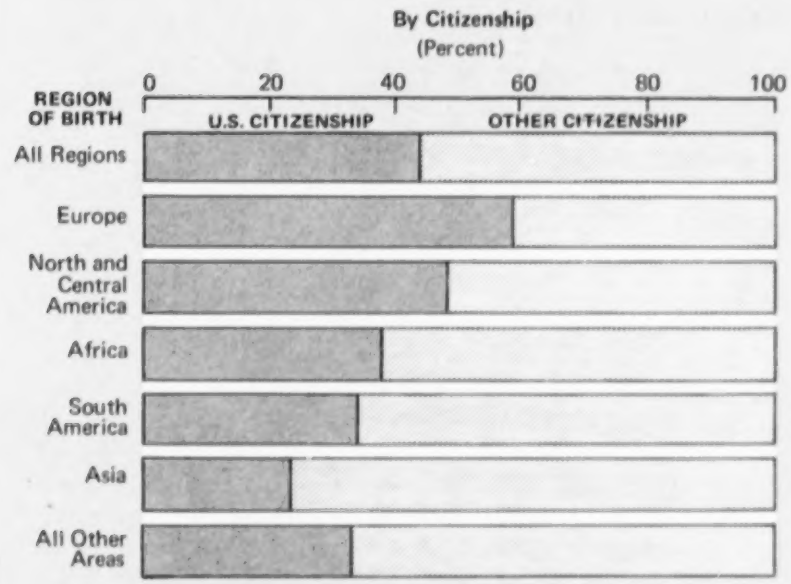
Source: National Register of Scientific and Technical Personnel, National Science Foundation.

Foreign scientists in the United States[a/]

By Sex and Field of Science



By Citizenship



[a/] Includes scientists who indicated both a foreign birthplace and a foreign secondary school.

SOURCE: National Science Foundation, based on data of the National Register of Scientific and Technical Personnel.

Sex

Males accounted for
the United States in 1970.
and 82 percent of the sc
show lesser proportions
natural scientists entering
the social scientists.

Citizenship

Nearly 9,700 of the 2
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As few as 23 percent of t
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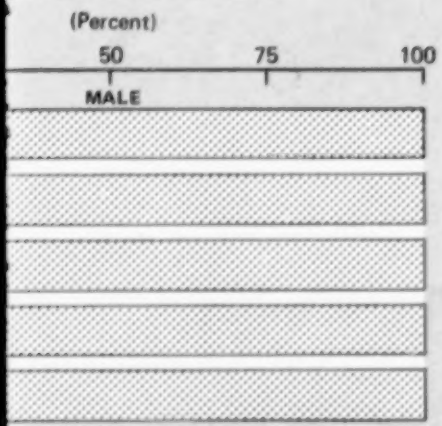
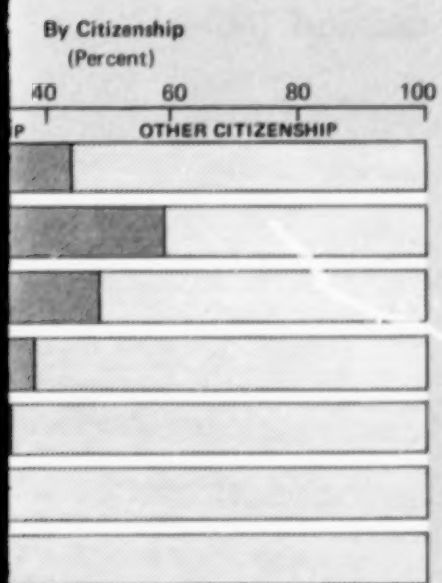
ex and Field of Science





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Sex

Males accounted for about 91 percent of total foreign-born scientists i the United States in 1970. They represented 93 percent of the natural scientist and 82 percent of the social scientists. Recent immigration data, howeve show lesser proportions of males. In 1970, for example, 76 percent of th natural scientists entering the United States were male, as were 75 percent o the social scientists.

Citizenship

Nearly 9,700 of the 22,900 (excludes nonresponse) foreign-born scientis in the National Register residing in the United States in 1970 were U.S. citizer As few as 23 percent of the Asians and 38 percent of the Africans were U. citizens, compared with 59 percent of the Europeans. These percentag reflect, at least partially, that prior to 1966 the numbers from Asia and Afri were well below the numbers from Europe; since then the Asian and Africa inflows have expanded greatly, while the European inflow has declined.

APPENDIXES

A. Technical Notes

B. Statistical Tables

APPENDIX A

Technical Notes

Coverage—This bulletin examines data on natural scientists, social scientists, engineers, and physicians and surgeons of foreign birth who were admitted to the United States (including Puerto Rico, the Virgin Islands, and Guam) as permanent residents through fiscal year 1970. It includes aliens admitted previously on a temporary basis who were granted immigrant status, as well as those aliens who do not change status. The section on *Characteristics of Foreign-born Scientists in the United States* also includes personnel who are now citizens.

The Immigration and Naturalization Service of the United States Department of Justice was the source of data on the immigrant and nonimmigrant "entries" discussed in this report. The immigrant data are taken from information supplied by the immigrant scientists, engineers, and physicians on their visa applications. The nonimmigrant data are also supplied by each nonimmigrant to the INS at the time he or she achieves status as a nonimmigrant.

Occupation—The classification of immigrants and nonimmigrants (excluding foreign scholars and students) into the various occupational specialties used in this bulletin is based on their own declarations. A bias, of unknown magnitude, may exist because of tendencies to exaggerate the level of occupational status. The specific specialty classifications within the three broad occupations—engineering, the natural sciences, and the social sciences—are underrepresented because some of the scientists and engineers appear to have classified themselves only in terms of the broad occupational group without indicating the detailed specialty within the field. It should also be borne in mind that the immigrants may find employment in fields unrelated to the occupational designations shown on the immigration record after they are admitted to the United States.

Educational Exchange—The analyses of foreign graduate students and foreign scholars located at United States universities and colleges in this report were based on published data of the Institute of International Education (IIE). Scholars are defined as foreign citizens, with permanent residence in a foreign country, who were not considered students and who were present at the institution one month or longer during the academic year covered by the survey. Included are visiting professors, lecturers, instructors, advanced research and teaching fellow and associates, visiting scholars, academic guests or specialists, and all such foreign senior participants in the educational programs of the institutions. Each institution provided the information on its scholars.

Prior to academic year 1966–1967 the IIE data included only those students who considered their permanent residence to be in a foreign country and who intended to reside permanently outside the United States upon completion of their studies. Thereafter the foreign student data also include those intending to remain in the United States. In 1969–1970, 15 percent of the foreign students stated they intended to remain in the United States.

Another factor possibly biasing the data on trends in foreign student enrollment is the yearly nonresponse of several hundred (of over 2,000) institutions of higher learning in the United States.

Foreign-Born Recipients of Doctorates From American Universities and Colleges—Data pertaining to the foreign-born recipients of doctorates of science and engineering from American universities were compiled by the National Academy of Sciences-National Research Council and cover all earned doctorates except professional degrees such as M.D., D.D.S., etc.

Foreign Scientists in the United States—Data on foreign scientists in the United States were compiled by the National Register of Scientific and Technical Personnel, National Science Foundation.

Immigrant Regulations—The basic law governing immigration to the United States through fiscal year 1965 was the Immigration and Nationality Act of 1952. This law continued the numerical limitations to immigration established by the Immigration Act of 1924; (i.e., annual quotas based on the national origins of the population of the United States in 1920), which determined the number of immigrant aliens who were permitted entry from each quota area. Immigration from specified countries of the Western Hemisphere was not numerically restricted by annual quotas, and individuals born there entered the United States under nonquota status. In addition, the law permitted nonquota entry for special classes of aliens, primarily those who were spouses or children of U.S. citizens.

As part of the quota system, first preference or highest priority in the granting of immigrant visas was given, as the Act states, ". . . to qualified quota immigrants whose services are determined by the Attorney General to be urgently needed in the United States because of the high education, technical training, specialized experience, or exceptional ability of such immigrants and to be substantially beneficial prospectively to the National economy, cultural interests, or welfare of the United States."

In October 1965, Congress revised t
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national origins that applied to all Eas
foreign countries with which some Easte
in government). From that date, the ma
been a system of preferences rather
countries have a combined overall limit
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cannot exceed a fixed percent of the 170
or persons of exceptional ability in the
preference" group, and cannot exceed
year. Skilled and unskilled workers, incl
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comprise the "sixth preference" group, a
Also, as in the past, many professional, t
to immigrate on the basis of other con
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During the period July 1, 1965 to Ju
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In addition to immigrants who ent
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—Data on foreign scientists in the United
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or exceptional ability of such immigrants
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ted States."

In October 1965, Congress revised the basic Immigration Law by abolishing, effective as of July 1, 1968, the limitations to immigration based on national origins that applied to all Eastern Hemisphere nations (and other foreign countries with which some Eastern Hemisphere nations are associated in government). From that date, the major consideration in issuing visas has been a system of preferences rather than national quotas. Former quota countries have a combined overall limit of 170,000 immigrants yearly with a ceiling of 20,000 for any one country. Immigration under each preference cannot exceed a fixed percent of the 170,000 total. Members of the professions or persons of exceptional ability in the sciences and arts comprise the "third preference" group, and cannot exceed 10 percent of the 170,000 total in any year. Skilled and unskilled workers, including scientists and engineers, whose entry as immigrants is designed to ease labor shortages in the United States, comprise the "sixth preference" group, another 10 percent of the 170,000 total. Also, as in the past, many professional, technical, and kindred workers eligible to immigrate on the basis of other considerations, such as familial relationships, may use those preferences to enter the United States or they may enter as the immediate relatives of U.S. citizens without regard to numerical limitations. Or, they may enter as nonpreference immigrants whenever such visas become available.

During the period July 1, 1965 to July 1, 1968, the quota system remained in effect, but with important modifications. The new preference system applied to each country's quota. Unused quotas were transferred to a "pool" which was available for preference immigrants from countries with oversubscribed quotas. Total immigration from any country with a quota, however, could not exceed 20,000 per year except for those countries that had quotas larger than 20,000 at the time the new law became effective. Effective July 1, 1968, the preference system applied without regard to national quotas, except for the 20,000 national limit which then applied to all Eastern Hemisphere countries. The effect was to place available visas within each preference category on the first-come first-served basis.

In addition to immigrants who enter the United States from the Eastern Hemisphere, a large number also come from Western Hemisphere nations to which, in most cases, numerical limitations did not apply until July 1, 1968. At that time the Act of 1965 limited immigration from all Western Hemisphere nations to 120,000 yearly.

Statistical Tables

APPENDIX B

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B-3 Scientists and engineers admitted to the United States as immigrants from selected countries of birth, by country of last permanent residence, fiscal year 1970 30

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Table B–1.—Immigrant scientists and engineers, by country or region of last permanent residence,* fiscal ye

Country or region of last permanent residence	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
All countries	3,952	6,046	5,380	5,290	4,550	4,171	4,297	5,933	5,762	5,345
Europe	1,757	3,068	2,354	2,527	2,021	1,711	1,764	2,318	2,447	2,407
Western Europe	1,742	2,877	2,307	1,905	1,870	1,618	1,698	2,258	2,368	2,319
Austria	45	101	64	101	52	26	22	36	36	54
Belgium	19	21	27	27	27	21	19	25	32	38
Denmark	60	78	48	48	40	30	33	45	42	46
France	82	104	85	94	86	58	48	93	88	110
Germany	359	679	438	459	340	311	303	376	451	389
Greece	86	69	67	75	63	52	58	92	70	50
Ireland	28	74	63	29	30	40	29	39	54	48
Italy	75	72	117	74	57	58	67	56	41	61
Netherlands	111	286	72	92	160	114	118	77	68	87
Norway	76	87	99	88	66	64	63	72	103	75
Spain	5	8	16	17	16	8	26	38	29	28
Sweden	147	173	120	91	85	73	57	81	94	116
Switzerland	157	192	143	114	138	104	100	144	154	181
Turkey	21	40	106	70	40	30	42	128	42	37
United Kingdom	441	866	815	510	640	606	688	939	1,042	985
Other	30	27	27	16	30	23	25	15	22	14
Eastern Europe	15	191	47	622	151	93	66	60	79	88
Czechoslovakia	3	1	2	3	7	5	2	1	3	8
Hungary	3	163	14	563	70	8	6	3	4	5
Poland	1	7	9	27	47	63	36	37	43	47
Rumania	1	4	3	6	3	3	6	2	6	10
Yugoslavia	3	9	12	18	12	8	10	14	20	13
Other	4	7	7	5	12	6	6	3	3	5
North and Central America	1,424	**	**	**	**	1,549	1,607	1,649	1,630	1,789
Canada	1,024	1,495	1,241	1,302	1,321	1,104	1,095	1,221	1,144	1,266
Cuba	93	80	85	51	88	178	156	87	148	161
Mexico	132	63	65	45	64	60	76	90	80	101
Other	175	**	**	**	**	207	280	251	258	261

See footnotes at end of table.

1956–1

–1.—Immigrant scientists and engineers, by country or region of last permanent residence,[a] fiscal years 1956–1970

1956–1966	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
20,205	5,046	5,380	5,290	4,550	4,171	4,297	5,933	5,762	5,345	7,205	12,523	12,973	10,255	13,337
9,914	2,068	2,354	2,527	2,021	1,711	1,764	2,318	2,447	2,407	2,914	4,494	4,974	2,613	2,779
7,796	1,877	2,307	1,905	1,870	1,618	1,698	2,258	2,368	2,319	2,796	4,356	4,772	2,429	2,535
668	101	64	101	52	26	22	36	36	54	68	86	101	159	134
330	21	27	27	27	21	19	25	32	38	30	61	64	25	31
564	78	48	48	40	30	33	45	42	46	64	94	105	40	48
1,119	104	85	94	86	58	48	93	88	110	119	164	207	107	146
3,165	679	438	459	340	311	303	376	451	389	365	492	769	320	356
991	69	67	75	63	52	58	92	70	50	91	152	143	147	200
441	74	63	29	30	40	29	39	54	48	41	45	57	56	35
1,121	72	117	74	57	58	67	56	41	61	121	166	145	175	180
777	286	72	92	160	114	118	77	68	87	77	134	152	68	65
777	87	99	88	66	64	63	72	103	75	77	132	148	54	40
436	8	16	17	16	8	26	38	29	28	36	47	95	58	53
1,101	173	120	91	85	73	57	83	94	116	101	198	205	68	59
2,136	192	143	114	138	104	100	144	154	181	236	276	251	74	122
960	40	106	70	40	30	42	128	42	37	60	84	61	64	82
6,287	866	815	510	640	606	688	939	1,042	985	1,287	2,186	2,212	988	945
423	27	27	16	30	23	25	15	22	14	23	39	57	26	39
2,118	191	47	622	151	93	66	60	79	88	118	138	202	184	244
113	1	2	3	7	5	2	1	3	8	13	9	27	19	40
706	163	14	563	70	8	6	3	4	5	6	11	11	13	13
662	7	9	27	47	63	36	37	43	47	62	62	88	58	53
310	4	3	6	3	3	6	2	6	10	10	1	5	5	22
719	9	12	18	12	8	10	14	20	13	19	45	61	81	105
168	7	7	5	12	6	6	3	3	5	8	10	10	8	11
6,680	[b]	[b]	[b]	[b]	1,549	1,607	1,649	1,630	1,789	1,680	2,480	2,867	1,560	1,620
9,173	1,495	1,241	1,302	1,321	1,104	1,095	1,221	1,144	1,266	1,173	1,623	1,940	1,163	1,231
1,144	80	85	51	88	178	156	87	148	161	144	366	525	51	62
1,600	63	65	45	64	60	76	90	80	101	100	110	81	76	63
2,263	[b]	[b]	[b]	[b]	207	280	231	258	261	263	381	321	270	264

Table B–1.—Immigrant scientists and engineers, by country or region of last permanent residence,[a] fiscal yea

Country or region of last permanent residence	1956	1957	1958	1959	1960	1961	1962	1963	1964	19
South America	330	462[c]	511[c]	348[c]	376[c]	368	368	485	549	47
Argentina	95	—	—	—	—	110	76	142	177	13
Bolivia	12	—	—	—	—	11	15	6	18	1
Brazil	68	—	—	—	—	42	60	66	60	6
Chile	16	—	—	—	—	34	30	38	35	4
Colombia	54	—	—	—	—	50	55	81	112	11
Ecuador	12	—	—	—	—	16	16	20	31	2
Peru	39	—	—	—	—	37	28	38	46	2
Venezuela	23	—	—	—	—	57	77	72	49	3
Other	11	—	—	—	—	11	11	22	22	1
Asia	317	465[c]	672[c]	629[c]	373[c]	362[c]	444	1,305	982	51
Near and Middle East	97[d]	—	—	—	—	—	170[d]	240[d]	181[d]	21
Far East	220	—	—	—	—	—	274	1,065	801	30
China (mainland)	78[e]	—	—	—	—	—	31[e]	183[e]	472[e]	2
Hong Kong	29	—	—	—	—	—	16	90	36	3
India	41	—	—	—	—	—	57	340	108	9
Japan	21	—	—	—	—	—	32	83	41	2
Korea	4	—	—	—	—	—	37	147	35	2
Philippines	7	—	—	—	—	—	21	115	22	2
Taiwan	—	—	—	—	—	—	—	—	—	2
Other	40[f]	—	—	—	—	—	80[f]	107[f]	87[f]	5
Africa	50	[g]	[g]	[g]	[g]	[g]	54	87	71	5
All other areas	74	413[h]	452[h]	388[h]	307[h]	181	60	89	83	9

[a] Last residence 1 year or more.
[b] Other countries of North and Central America not separable from "All other countries" for 1957–1960.
[c] Data for individual countries not available.
[d] Iran, Iraq, Israel, Jordan and Labanon.
[e] Includes Taiwan.
[f] Includes Near and Middle Eastern count
[g] Not separately available; included with
[h] Includes Africa, Other North and Centra

Source: National Science Foundation, fron
U.S. Department of Justice.

1956–1970 —Immigrant scientists and engineers, by country or region of last permanent residence,[a] fiscal years 1956–1970—Continued

196	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
40	462[c]	511[c]	348[c]	376[c]	368	368	485	549	475	409	475	595	413	310
9	—	—	—	—	110	76	142	177	137	97	148	152	59	41
1	—	—	—	—	11	15	6	18	13	13	22	16	12	9
5	—	—	—	—	42	60	66	60	62	57	77	73	48	63
2	—	—	—	—	34	30	38	35	42	24	25	42	27	22
13	—	—	—	—	50	55	81	112	115	133	97	143	137	78
14	—	—	—	—	16	16	20	31	25	14	23	50	27	18
2	—	—	—	—	37	28	38	46	27	22	26	45	38	28
3	—	—	—	—	57	77	72	49	39	31	35	47	36	31
18	—	—	—	—	11	11	22	22	15	18	22	27	29	20
2,02	465[c]	672[c]	629[c]	373[c]	362[c]	444	1,305	982	518	2,025	4,740	4,021	4,905	7,454
31	—	—	—	—	—	170[d]	240[d]	181[d]	215	315	542	522	522	703
1,71	—	—	—	—	—	274	1,065	801	303	1,710	4,198	3,499	4,383	6,751
6	—	—	—	—	—	31[e]	183[e]	472[e]	21	68	265	190	168	252
17	—	—	—	—	—	16	90	36	38	174	351	200	181	221
89	—	—	—	—	—	57	340	108	94	894	1,422	1,232	1,477	2,899
8	—	—	—	—	—	32	83	41	25	83	143	109	101	152
11	—	—	—	—	—	37	147	35	23	119	231	182	220	313
12	—	—	—	—	—	21	115	22	22	128	475	752	1,427	1,549
16	—	—	—	—	—	—	—	—	25	162	1,121	626	515	943
8	—	—	—	—	—	80[f]	107[f]	87[f]	55	82	190	208	294	422
6	[g]	[g]	[g]	[g]	[g]	54	87	71	59	69	181	358	646	1,024
10	413[h]	452[h]	388[h]	307[h]	181	60	89	83	97	108	153	158	118	150

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[f] Includes Near and Middle Eastern countries not listed in footnote d.
[g] Not separately available; included with all other areas.
[h] Includes Africa, Other North and Central America and all other not elsewhere classified.

Source: National Science Foundation, from data of the Immigration and Naturalization Service, U.S. Department of Justice.

Table B–2.—Immigrant physicians and surgeons admitted to the United States, by country or region of last permanent

Country or region of last permanent residence	1956	1957	1958	1959	1960	1961	1962	1963	1964	196
All countries	1,388	1,990	1,934	1,630	1,574	1,683	1,797	2,093	2,249	2,01
Europe	594	871	781	726	550	553	502	575	623	56
Western Europe	578	824	731	565	485	492	471	551	591	53
Austria	33	67	24	27	16	11	6	15	14	1
Belgium	6	9	10	9	8	17	12	16	15	1
Denmark	8	6	—	5	3	2	5	4	4	
France	30	32	32	32	25	14	25	24	34	2
Germany	179	206	128	95	75	77	73	71	82	7
Greece	34	61	53	23	37	32	31	31	30	2
Ireland	22	48	54	47	56	22	21	27	23	2
Italy	100	119	82	66	49	39	47	49	22	2
Netherlands	35	41	32	29	31	28	14	16	15	1
Norway	5	3	—	5	5	1	1	1	3	
Spain	8	23	32	22	17	23	47	47	108	5
Sweden	12	6	8	11	5	9	10	9	7	1
Switzerland	23	33	32	27	21	29	21	28	31	3
Turkey	3	17	48	19	10	43	31	55	29	3
United Kingdom	76	142	189	147	125	140	119	154	165	14
Other	4	11	7	1	2	5	8	4	9	
Eastern Europe	16	47	50	161	65	61	31	24	32	3
Czechoslovakia	—	1	1	1	—	1	—	1	—	
Hungary	—	40	34	136	37	27	2	—	2	
Poland	2	2	7	12	20	23	16	10	19	1
Rumania	1	—	—	—	1	1	3	1	4	
Yugoslavia	7	3	6	9	5	6	9	10	5	
Other	6	1	2	3	2	3	1	2	2	
North and Central America	465	[b]	[b]	[b]	[b]	[b]	692	873	909	84
Canada	151	256	218	210	245	287	280	467	440	38
Cuba	112	199	86	77	94	94	120	156	229	20
Mexico	93	95	57	44	66	64	70	97	77	11
Other	109	[b]	[b]	[b]	[b]	[b]	222	153	163	15

See footnotes at end of table.

idence,[a] fisc … physicians and surgeons admitted to the United States, by country or region of last permanent residence,[a] fiscal years 1956–1970

1966	57	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
2,549	90	1,934	1,630	1,574	1,683	1,797	2,093	2,249	2,012	2,549	3,325	3,060	2,756	3,155
667	71	781	726	550	553	502	575	623	568	667	860	673	579	643
613	24	731	565	485	492	471	551	591	531	613	803	572	504	545
16	67	24	27	16	11	6	15	14	17	16	34	27	49	35
17	9	10	9	8	17	12	16	15	17	17	18	6	6	6
2	6	—	5	3	2	5	4	4	4	2	6	4	6	4
24	32	32	32	25	14	25	24	34	28	24	35	13	17	26
81	06	128	95	75	77	73	71	82	75	81	91	93	52	67
38	61	53	23	37	32	31	31	30	25	38	55	34	36	39
22	48	54	47	56	22	21	27	23	29	22	22	21	18	12
43	19	82	66	49	39	47	49	22	22	43	70	47	51	41
11	41	32	29	31	28	14	16	15	13	11	14	18	7	3
6	3	—	5	5	1	1	1	3	6	6	8	7	1	4
53	23	32	22	17	23	47	47	108	52	53	60	74	51	36
20	6	8	11	5	9	10	9	7	18	20	18	13	8	8
27	13	32	27	21	29	21	28	31	37	27	46	43	12	22
57	17	48	19	10	43	31	55	29	36	57	111	49	42	44
187	42	189	147	125	140	119	154	165	147	187	206	121	140	192
9	11	7	1	2	5	8	4	9	5	9	9	2	8	5
54	47	50	161	65	61	31	24	12	37	54	57	101	75	98
4	1	1	1	—	1	—	1	—	7	4	6	15	10	19
8	40	34	136	37	27	2	—	2	3	8	2	4	3	5
22	2	7	12	20	23	16	10	19	18	22	23	36	21	27
5	—	—	—	1	1	3	1	4	3	5	4	5	4	15
12	3	6	9	5	6	9	10	5	5	12	20	41	36	29
3	1	2	3	2	3	1	2	2	1	3	2	—	1	3
855	[b]	[b]	[b]	[b]	[b]	692	873	989	848	855	882	743	415	412
393	56	218	210	245	287	280	467	440	380	393	449	325	236	240
150	99	86	77	94	94	120	156	229	201	150	162	214	54	52
119	95	57	44	66	64	70	97	77	110	119	86	55	32	29
193	[b]	[b]	[b]	[b]	[b]	222	153	161	157	193	185	149	93	91

Table B–2.—Immigrant physicians and surgeons admitted to the United States, by country or region of last permanent

Country or region of last permanent residence	1956	1957	1958	1959	1960	1961	1962	1963	1964
South America[a]	159	228	285	227	256	208	298	327	454
Argentina	37	—	—	—	—	74	94	116	151
Bolivia	2	—	—	—	—	4	5	9	24
Brazil	48	—	—	—	—	12	24	29	26
Chile	11	—	—	—	—	7	5	8	15
Colombia	15	—	—	—	—	52	75	90	158
Ecuador	12	—	—	—	—	3	6	15	10
Peru	26	—	—	—	—	37	43	22	32
Venezuela	6	—	—	—	—	15	38	27	24
Other	2	—	—	—	—	4	8	11	14
Asia[d]	139	155	316	207	244	269	265	260	204
Near and Middle East	44	—	—	—	—	—	80	45	77
Far East	95	—	—	—	—	—	185	215	127
China (mainland)	37[e]	—	—	—	—	—	4[e]	12[e]	17[e]
Hong Kong	11	—	—	—	—	—	3	15	2
India	3	—	—	—	—	—	12	16	8
Japan	3	—	—	—	—	—	8	35	4
Korea	3	—	—	—	—	—	18	19	10
Philippines	27	—	—	—	—	—	119	101	63
Taiwan	—	—	—	—	—	—	—	—	—
Other	11	—	—	—	—	—	21	17	23
Africa	19	[f]	[f]	[f]	[f]	[f]	32	49	49
All other areas	12	186[g]	191[g]	139[g]	120[g]	208[g]	8	9	10

[a] Last residence 1 year or more.
[b] Other countries of North and Central America not separable from "All other areas" for 1957–1961.
[c] Data for individual countries not available separately for years 1957–1960.
[d] Data for individual countries not available separately for years 1957–1961.
[e] Includes Taiwan for years 1956, 1962–1964.
[f] Not available as a separate item fo
[g] Includes Africa, "Other North an

Source: National Science Foundatio
U.S. Department of Justice,

idence,[1] fiscal ye ysicians and surgeons admitted to the United States, by country or region of last permanent residence,[1] fiscal years 1956–1970—Continued

1965	1966	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
348	355	228	285	227	256	208	298	327	454	348	355	358	341	172	160
140	115	—	—	—	—	74	94	116	151	140	115	126	95	42	32
28	19	—	—	—	—	4	5	9	24	28	19	16	15	13	15
37	33	—	—	—	—	12	24	29	26	37	33	19	18	7	7
8	11	—	—	—	—	7	5	8	15	8	11	3	16	8	11
82	80	—	—	—	—	52	75	90	158	82	80	116	116	47	36
13	23	—	—	—	—	3	6	15	10	13	23	17	42	29	14
25	46	—	—	—	—	37	43	22	32	25	46	27	15	14	13
10	11	—	—	—	—	15	38	27	24	10	11	15	14	8	11
5	17	—	—	—	—	4	8	11	14	5	17	19	10	4	21
205	588	155	316	207	244	269	265	260	204	205	588	1,116	1,195	1,435	1,726
81	148	—	—	—	—	—	80	45	77	81	148	235	238	185	231
124	440	—	—	—	—	—	185	215	127	124	440	881	957	1,250	1,495
2	5	—	—	—	—	—	4[e]	12[e]	17[e]	2	5	15	6	13	11
4	26	—	—	—	—	—	3	15	2	4	26	42	42	39	41
11	40	—	—	—	—	—	12	16	8	11	40	87	96	129	242
11	31	—	—	—	—	—	8	35	4	11	31	40	23	28	35
11	35	—	—	—	—	—	18	19	10	11	35	70	63	128	228
66	259	—	—	—	—	—	119	101	63	66	259	550	639	785	769
2	11	—	—	—	—	—	—	—	—	2	11	34	21	27	36
17	33	—	—	—	—	—	21	17	23	17	33	43	130	229	133
31	60	[f]	[f]	[f]	[f]	[f]	32	49	49	31	60	86	87	137	188
12	24	186[e]	191[e]	139[e]	120[e]	208[e]	8	9	10	12	24	23	21	18	26

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rately for years 1957–1961.

[f] Not available as a separate item for 1957–61; included in all other areas.
[e] Includes Africa, "Other North and Central America" and all other areas not elsewhere classified.

Source: National Science Foundation, from data of the Immigration and Naturalization Service, U.S. Department of Justice.

Table B–3.—Scientists and engineers admitted to the United States as immigrants from selected countries of birth, by c

Country of birth	Total	Country of last permanent resid								
		Same as country of birth	France	Germany	Hungary	Poland	Switzer-land	Turkey	United Kingdom	Hon Kon
France	101	78		—	—	—	—	—	1	—
Germany	306	235	3		—	1	12	—	5	—
Greece	212	182	1	4	—	—	—	—	4	—
Hungary	84	9	—	7		—	3	1	9	—
Italy	93	65	2	1	—	—	2	—	1	—
Netherlands	78	41	2	2	—	1	1	—	1	—
Norway	45	37	—	—	—	—	1	—	—	—
Poland	150	49	6	6	—		1	—	5	—
Sweden	42	40	—	—	—	—	—	—	1	—
Switzerland	94	74	—	1	1	—		—	4	—
Turkey	108	73	1	3	—	—	—		4	—
United Kingdom	802	591	1	1	—	—	2	—		—
Hong Kong	52	32	—	—	—	—	—	—	2	
China (mainland)	965	222	2	6	—	—	2	1	5	155
India	3,224	2,602	1	18	—	—	9	—	173	1
Iran	249	232	1	—	—	—	1	2	1	—
Israel	118	93	1	1	—	—	—	—	2	—
Japan	147	117	—	2	—	—	—	—	2	2
Korea	326	295	—	1	—	—	—	—	—	—
Pakistan	463	108	—	1	—	—	—	—	28	—
Philippines	1,609	1,527	—	—	—	—	—	—	1	3
Taiwan	556	483	—	2	1	—	1	—	1	15
United Arab Republic	900	745	11	12	1	—	2	—	10	—
Jamaica	78	56	—	—	—	—	—	—	12	—
Canada	234	227	1	—	—	—	—	—	2	—
Cuba	85	57	—	1	—	—	—	—	—	—
Argentina	34	25	—	—	—	—	—	—	—	—
Colombia	74	68	—	—	—	—	—	—	—	—

* Last residence 1 year or more.

Note: Data include professors and instructors.

Source: National Science Foundation, from data of the Immigration and Naturalization Service, U.S. Department of Justice.

gineers admitted to the United States as immigrants from selected countries of birth, by country of last permanent residence, fiscal year 1970

Country of last permanent residence*														
e as ntry of rth	France	Germany	Hungary	Poland	Switzer-land	Turkey	United Kingdom	Hong Kong	China (main land)	India	Pakistan	Taiwan	Canada	Other
78		—	—	—	—	—	1	—	—	—	—	—	9	13
35	3		—	1	12	—	5	—	—	—	—	1	28	21
82	1	4	—	—	—	—	4	—	—	—	—	—	15	6
9	—	7		—	3	1	9	—	—	—	—	—	24	31
65	2	1	—	—	2	—	1	—	—	—	1	—	9	12
41	2	2	—	1	1	—	1	—	—	—	—	—	17	13
37	—	—	—	—	1	—	—	—	—	—	—	—	5	2
49	6	6	—		1	—	5	—	—	—	—	—	18	65
40	—	—	—	—	—	—	1	—	—	—	—	—	1	—
74	—	1	1	—		—	4	—	—	—	—	—	9	5
73	1	3	—	—	—		4	—	—	—	—	—	15	12
91	1	1	—	—	2	—		—	—	—	1	—	153	53
32	—	—	—	—	—	—	2		3	—	—	3	9	3
22	2	6	—	—	2	1	5	155		4	1	433	59	75
02	1	18	—	—	9	—	173	1	10		69	4	264	73
32	1	—	—	—	1	2	1	—	—	3	—	—	3	6
93	1	1	—	—	—	—	2	—	—	—	—	—	4	17
17	—	2	—	—	—	—	2	2	—	4	—	6	4	10
95	—	1	—	—	—	—	—	—	2	—	—	—	12	16
08	—	1	—	—	—	—	28	—	6	264		—	45	11
27	—	—	—	—	—	—	1	3	—	—	—	3	44	31
83	—	2	1	—	1	—	1	15	5	—	1		15	32
45	11	12	1	—	2	—	10	—	—	—	—	2	37	80
56	—	—	—	—	—	—	12	—	—	—	—	—	10	—
27	1	—	—	—	—	—	2	—	—	—	—	—		4
57	—	1	—	—	—	—	—	—	—	—	—	—	—	27
25	—	—	—	—	—	—	—	—	—	—	—	—	2	7
68	—	—	—	—	—	—	—	—	—	—	—	—	1	5

the Immigration and Naturalization Service, U.S. Department of Justice.

Table B–4.—Physicians and surgeons admitted to the United States as immigrants from selected countries of birth, by country of last pe

Country of birth	Total	Country of last permanent residence*										
		Same as country of birth	Germany	Greece	Italy	Spain	Turkey	United Kingdom	India	Iran	Korea	Philip-pines
Germany	30	24		—	—	—	—	—	—	—	—	—
Greece	47	35	1		—	—	1	4	—	—	—	—
Italy	20	17	—	—		—	—	—	—	—	—	—
Poland	57	26	1	—	8	—	—	4	—	—	—	—
Rumania	47	12	1	1	10	—	—	—	—	—	—	—
Spain	25	18	—	—	—		—	1	—	—	—	—
Switzerland	10	6	—	—	—	—	—	1	—	—	—	—
Turkey	49	43	—	—	—	—		—	—	—	—	—
United Kingdom	77	52	—	—	—	—	—		—	—	—	—
Hong Kong	12	8	—	—	—	—	—	—	—	—	—	—
China (mainland)	73	9	2	—	—	—	—	1	—	—	2	3
India	357	229	3	—	—	—	—	55		—	—	—
Iran	141	126	2	—	—	—	—	4	—		—	—
Japan	31	26	—	—	—	—	—	—	—	—	1	—
Korea	251	223	3	—	—	—	—	—	—	—		—
Philippines	803	760	—	—	1	—	—	—	—	—	—	
United Arab Republic	209	128	3	3	—	—	—	37	—	—	—	—
South Africa	14	11	1	—	—	—	—	1	—	—	—	—
Canada	46	44	—	—	—	—	—	—	—	—	—	—
Mexico	24	22	—	—	—	—	—	1	—	—	—	—
Cuba	73	51	—	—	—	16	—	—	—	—	—	—
Haiti	38	32	—	—	—	1	—	1	—	—	—	—
Argentina	24	21	—	—	—	—	—	1	—	—	—	—
Brazil	5	2	—	—	—	—	—	—	—	—	—	—
Colombia	41	35	—	—	—	—	—	—	—	—	—	—

* Last residence 1 year or more.

Note: Data include professors and instructors.

Source: National Science Foundation, from data of the Immigration and Naturalization Service, U.S. Department of Justice.

urgeons admitted to the United States as immigrants from selected countries of birth, by country of last permanent residence, fiscal year 1970

	Country of last permanent residence*													
Germany	Greece	Italy	Spain	Turkey	United Kingdom	India	Iran	Korea	Philippines	Canada	Mexico	Cuba	Argentina	Other
	—	—	—	—	—	—	—	—	—	2	—	—	—	4
1		—	—	1	4	—	—	—	—	2	—	—	—	4
—	—		—	—	—	—	—	—	—	1	—	—	2	—
1	—	8	—	—	4	—	—	—	—	5	1	—	—	12
1	1	10	—	—	—	—	—	—	—	18	—	—	—	—
—	—	—		—	1	—	—	—	—	3	—	1	1	1
—	—	—	—	—	1	—	—	—	—	—	—	—	1	2
—	—	—	—		—	—	—	—	—	3	—	—	—	3
—	—	—	—	—		—	—	—	—	15	—	—	—	10
—	—	—	—	—	—	—	—	—	—	1	—	—	—	3
2	—	—	—	—	1	—	—	2	3	7	—	—	—	49
3	—	—	—	—	55		—	—	—	40	—	—	—	30
2	—	—	—	—	4	—		—	—	4	—	—	—	5
—	—	—	—	—	—	—	—	1	—	1	—	—	—	3
3	—	—	—	—	—	—	—		—	10	—	—	—	15
—	—	1	—	—	—	—	—	—		30	—	—	—	12
3	3	—	—	—	37	—	—	—	—	15	—	—	—	23
1	—	—	—	—	1	—	—	—	—	1	—	—	—	—
—	—	—	—	—	—	—	—	—	—		—	—	—	2
—	—	—	—	—	1	—	—	—	—	1		—	—	—
—	—	—	16	—	—	—	—	—	—	2	2		—	2
—	—	—	1	—	1	—	—	—	—	—	—	—	—	4
—	—	—	—	—	1	—	—	—	—	—	—	—		2
—	—	—	—	—	—	—	—	—	—	1	1	—	1	—
—	—	—	—	—	—	—	—	—	—	3	—	—	1	2

...n the Immigration and Naturalization Service, U.S. Department of Justice.

Table B–5.—Scientists, engineers, and physicians and surgeons admitted to the United States as immigrants, by sex and age group and by region of last permanent residence,[a] fiscal years 1969 and 1970

Sex and age group	Last permanent residence							
	All regions		Europe	Asia	North & Central America	South America	Africa	All other
	Number	Percent[b]						
	1969							
Scientists and engineers	10,255	100.0	2,613	4,905	1,560	413	646	118
Under 30	4,885	47.6	1,243	2,529	538	177	355	43
30–44	4,690	45.7	1,152	2,223	803	193	257	62
Over 44	680	6.6	218	153	219	43	34	13
Male	9,194	100.0	2,380	4,278	1,447	363	614	112
Under 30	4,212	45.8	1,118	2,098	473	145	337	41
30–44	4,345	47.3	1,058	2,042	767	176	244	58
Over 44	637	6.9	204	138	207	42	33	13
Female	1,061	100.0	233	627	113	50	32	6
Under 30	673	63.4	125	431	65	32	18	2
30–44	345	32.5	94	181	36	17	13	4
Over 44	43	4.1	14	15	12	1	1	—
Physicians and surgeons	2,756	100.0	579	1,435	415	172	137	18
Under 30	657	23.8	125	388	65	40	33	6
30–44	1,813	65.8	378	954	272	114	84	11
Over 44	286	10.4	76	93	87	18	20	1
Male	1,956	100.0	413	940	332	141	120	10
Under 30	360	18.4	63	195	41	29	30	2
30–44	1,363	69.7	295	673	220	95	73	7
Over 44	233	11.9	55	72	71	17	17	1
Female	800	100.0	166	495	83	31	17	8
Under 30	297	37.1	62	193	24	11	3	4
30–44	450	56.3	83	281	52	19	11	4
Over 44	53	6.6	21	21	7	1	3	—

See footnotes at end of table.

Table B–5.—Scientists, engineers, and physicia as immigrants, by sex and age group and fiscal years 1969 an

Sex and age group	All regions		Euro
	Number	Percent[b]	
Scientists and engineers	13,337	100.0	2,7
Under 30	6,529	49.0	1,2
30–44	6,069	45.5	1,3
Over 44	739	5.5	2
Male	12,104	100.0	2,5
Under 30	5,750	47.5	1,0
30–44	5,666	46.8	1,2
Over 44	688	5.7	2
Female	1,233	100.0	2
Under 30	779	63.2	1
30–44	403	32.7	
Over 44	51	4.1	
Physicians and surgeons	3,155	100.0	6
Under 30	703	22.3	1
30–44	2,152	68.2	4
Over 44	300	9.5	
Male	2,362	100.0	4
Under 30	434	18.4	
30–44	1,676	71.0	3
Over 44	252	10.7	
Female	793	100.0	1
Under 30	269	33.9	
30–44	476	60.0	
Over 44	48	6.1	

[a] Last residence 1 year or more before entering the U

[b] Percent detail may not add to 100.0 because of rou

Note: Data includes professors and instructors.

Source: National Science Foundation, from data of th U.S. Department of Justice.

...icians and surgeons admitted to the United States ...nd by region of last permanent residence,[a] ... 1969 and 1970

	Last permanent residence					
...rope	Asia	North & Central America	South America	Africa	All other
	1969				
2,613	4,905	1,560	413	646	118
1,243	2,529	538	177	355	43
1,152	2,223	803	193	257	62
218	153	219	43	34	13
2,380	4,278	1,447	363	614	112
1,118	2,098	473	145	337	41
1,058	2,042	767	176	244	58
204	138	207	42	33	13
233	627	113	50	32	6
125	431	65	32	18	2
94	181	36	17	13	4
14	15	12	1	1	—
579	1,435	415	172	137	18
125	388	65	40	33	6
378	954	272	114	84	11
76	93	87	18	20	1
413	940	332	141	120	10
63	195	41	29	30	2
295	673	220	95	73	7
55	72	71	17	17	1
166	495	83	31	17	8
62	193	24	11	3	4
83	281	52	19	11	4
21	21	7	1	3	—

Table B–5.—Scientists, engineers, and physicians and surgeons admitted to the United States as immigrants, by sex and age group and by region of last permanent residence,[a] fiscal years 1969 and 1970—Continued

Sex and age group	Last permanent residence							
	All regions		Europe	Asia	North & Central America	South America	Africa	All other
	Number	Percent[b]						
	1970							
Scientists and engineers	13,337	100.0	2,779	7,454	1,620	310	1,024	150
Under 30	6,529	49.0	1,207	4,004	592	134	529	63
30–44	6,069	45.5	1,337	3,197	849	153	457	76
Over 44	739	5.5	235	253	179	23	38	11
Male	12,104	100.0	2,537	6,697	1,515	279	942	134
Under 30	5,750	47.5	1,081	3,490	537	117	472	53
30–44	5,666	46.8	1,242	2,970	811	139	432	72
Over 44	688	5.7	214	237	167	23	38	9
Female	1,233	100.0	242	757	105	31	82	16
Under 30	779	63.2	126	514	55	17	57	10
30–44	403	32.7	95	227	38	14	25	4
Over 44	51	4.1	21	16	12	—	—	2
Physicians and surgeons	3,155	100.0	643	1,726	412	160	188	26
Under 30	703	22.3	124	412	70	39	54	4
30–44	2,152	68.2	437	1,204	262	108	121	20
Over 44	300	9.5	82	110	80	13	13	2
Male	2,362	100.0	486	1,211	340	142	160	23
Under 30	434	18.4	68	246	44	35	39	2
30–44	1,676	71.0	355	876	222	96	108	19
Over 44	252	10.7	63	89	74	11	13	2
Female	793	100.0	157	515	72	18	28	3
Under 30	269	33.9	56	166	26	4	15	2
30–44	476	60.0	82	328	40	12	13	1
Over 44	48	6.1	19	21	6	2	—	—

[a] Last residence 1 year or more before entering the United States.

[b] Percent detail may not add to 100.0 because of rounding.

Note: Data includes professors and instructors.

Source: National Science Foundation, from data of the Immigration and Naturalization Service, U.S. Department of Justice.

Table B–6.—Scientists, engineers, and physicians and surgeons admitted to the United States as immigrants, by State of intended residence, fiscal years 1969 and 1970

Geographic division and State of intended residence	Scientists and engineers		Physicians and surgeons	
	1969	1970	1969	1970
United States, total	10,255	13,337	2,756	3,155
New England	645	836	200	240
Maine	16	18	10	10
New Hampshire	7	18	2	8
Vermont	34	27	4	6
Massachusetts	400	460	118	141
Rhode Island	28	33	27	37
Connecticut	160	280	39	38
Middle Atlantic	2,925	4,329	985	1,106
New York	1,866	2,582	727	772
New Jersey	479	1,033	129	187
Pennsylvania	562	714	129	147
East North Central	1,881	2,589	585	686
Ohio	380	511	227	220
Indiana	200	174	18	21
Illinois	686	1,002	202	239
Michigan	469	696	107	165
Wisconsin	146	206	31	41
West North Central	522	626	119	141
Minnesota	155	188	32	43
Iowa	48	116	10	18
Missouri	192	201	61	54
North Dakota	8	17	—	11
South Dakota	6	10	3	1
Nebraska	31	29	6	6
Kansas	82	65	7	8
South Atlantic				
Delaware				
Maryland				
District of Columbia				
Virginia				
West Virginia				
North Carolina				
South Carolina				
Georgia				
Florida				
East South Central				
Kentucky				
Tennessee				
Alabama				
Mississippi				
West South Central				
Arkansas				
Louisiana				
Oklahoma				
Texas				
Mountain				
Montana				
Idaho				
Wyoming				
Colorado				
New Mexico				
Arizona				
Utah				
Nevada				
Pacific				
Washington				
Oregon				
California				
Alaska				
Hawaii				
Other*				

* Includes those intending to reside in U.S.

Source: National Science Foundation, from U.S. Department of Justice.

…s and surgeons admitted to the United States as …al years 1969 and 1970

	Scientists and engineers		Physicians and surgeons	
	1969	1970	1969	1970
	12,255	13,337	2,756	3,155
	645	836	200	240
	16	18	10	10
	7	18	2	8
	14	27	4	6
	400	460	118	141
	28	33	27	37
	160	280	39	38
	3,925	4,329	985	1,106
	2,066	2,582	727	772
	479	1,033	129	187
	562	714	129	147
	2,081	2,589	585	686
	380	511	227	220
	200	174	18	21
	686	1,002	202	239
	469	696	107	165
	146	206	31	41
	522	626	119	141
	155	188	32	43
	48	116	10	18
	192	201	61	54
	8	17	—	11
	6	10	3	1
	31	29	6	6
	82	65	7	8

Geographic division and State of intended residence	Scientists and engineers		Physicians and surgeons	
	1969	1970	1969	1970
South Atlantic	863	993	341	394
Delaware	39	47	7	13
Maryland	205	233	128	140
District of Columbia	106	119	36	40
Virginia	124	151	37	55
West Virginia	41	30	29	37
North Carolina	92	93	15	20
South Carolina	21	31	6	4
Georgia	80	99	13	26
Florida	155	190	70	59
East South Central	159	170	49	44
Kentucky	27	35	25	23
Tennessee	75	80	20	15
Alabama	29	40	2	1
Mississippi	28	15	2	5
West South Central	524	580	72	84
Arkansas	12	10	1	2
Louisiana	86	79	9	11
Oklahoma	70	74	6	4
Texas	356	417	56	67
Mountain	249	330	18	52
Montana	8	11	—	—
Idaho	11	10	—	2
Wyoming	7	6	—	1
Colorado	88	113	7	16
New Mexico	19	22	3	4
Arizona	43	68	3	19
Utah	59	94	4	9
Nevada	14	6	1	1
Pacific	2,340	2,770	338	364
Washington	372	207	41	34
Oregon	54	71	6	13
California	1,827	2,361	263	284
Alaska	3	15	—	—
Hawaii	84	116	28	33
Other*	147	114	49	44

* Includes those intending to reside in U.S. territories and those not reporting.

Source: National Science Foundation, from data of the Immigration and Naturalization Service, U.S. Department of Justice.

Table B–7.—Scientists and engineers admitted to the United States as nonimmigrants, by country or region of last permanent residence,

Country or region of last permanent residence	1965[b]					1966				
	Total	J–1[c]	H–1[d]	H–2[e]	H–3[f]	Total	J–1[c]	H–1[d]	H–2[e]	H–
All countries	5,323	4,214	511	78	520	5,457	4,335	434	50	63
Europe	2,133	1,677	185	24	247	2,291	1,859	183	19	23
Western Europe	1,930	1,498	161	24	247	2,230	1,799	182	19	23
Austria	40	31	2	—	7	44	32	4	—	
Belgium	51	40	3	1	7	52	38	3	—	1
Denmark	50	44	4	—	2	40	35	3	—	
France	239	166	15	8	50	233	174	15	5	3
Germany	278	231	16	—	31	297	245	18	—	3
Greece	24	16	3	1	4	22	19	1	—	
Ireland	22	20	1	—	1	29	25	1	2	
Italy	130	108	8	2	12	150	130	9	2	
Netherlands	119	92	8	—	19	134	109	8	1	1
Norway	40	36	1	1	2	41	37	1	1	
Spain	40	35	3	—	2	44	35	5	—	
Sweden	110	83	9	2	16	98	82	8	2	
Switzerland	95	55	14	1	25	78	42	14	3	1
Turkey	124	123	—	—	1	141	141	—	—	
United Kingdom	497	354	69	8	66	544	399	68	3	7
Other	71	64	5	—	2	283	256[g]	24[g]	—	
Eastern Europe	203	179	24	—	—	61	60[g]	1[g]	—	
Czechoslovakia	35	22	13	—	—	—	—	—	—	
Hungary	26	20	6	—	—	—	—	—	—	
Poland	82	80	2	—	—	61	60	1	—	
Rumania	3	3	—	—	—	—	—	—	—	
Yugoslavia	53	51	2	—	—	—	—	—	—	
Other	4	3	1	—	—	—	—	—	—	
North and Central America	770	379	216	40	135	673	364	155	21	13
Canada	513	218	144	33	118	487	212	143	16	11
Cuba	—	—	—	—	—	—	—	—	—	
Mexico	107	63	30	2	12	77	63	2	—	1
Other	150	98	42	5	5	109	89	10	5	

See footnotes at end of table.

d by class

rs admitted to the United States as nonimmigrants, by country or region of last permanent residence,[a] and by class of admission, fiscal years 1965–70

Total	1965[b]					1966					1967				
	Total	J–1[c]	H–1[d]	H–2[e]	H–3[f]	Total	J–1[c]	H–1[d]	H–2[e]	H–3[f]	Total	J–1[c]	H–1[d]	H–2[e]	H–3[f]
5,379	5,323	4,214	511	78	520	5,457	4,335	434	50	638	5,379	4,141	452	179	607
2,494	2,133	1,677	185	24	247	2,291	1,859	183	19	230	2,494	1,820	244	120	310
2,287	1,930	1,498	161	24	247	2,230	1,799	182	19	230	2,287	1,636	223	119	309
40	40	31	2	—	7	44	32	4	—	8	40	31	1	1	7
60	51	40	3	1	7	52	38	3	—	11	60	49	4	1	6
54	50	44	4	—	2	40	35	3	—	2	54	47	1	1	5
219	239	166	15	8	50	233	174	15	5	39	219	161	12	1	45
301	278	231	16	—	31	297	245	18	—	34	301	230	42	—	29
22	24	16	3	1	4	22	19	1	—	2	22	20	1	—	1
28	22	20	1	—	1	29	25	1	2	1	28	24	4	—	—
154	130	108	8	2	12	150	130	9	2	9	154	132	9	3	10
126	119	92	8	—	19	134	109	8	1	16	126	96	4	—	26
52	40	36	1	1	2	41	37	1	1	2	52	46	4	—	2
55	40	35	3	—	2	44	35	5	—	4	55	44	4	—	7
87	110	83	9	2	16	98	82	8	2	6	87	68	8	—	11
106	95	55	14	1	25	78	42	14	3	19	106	54	12	1	39
107	124	123	—	—	1	141	141	—	—	—	107	106	—	—	1
813	497	354	69	8	66	544	399	68	3	74	813	473	114	110	116
63	71	64	5	—	2	283	256[g]	24[g]	—	3[g]	63	55	3	1	4
207	203	179	24	—	—	61	60[g]	1[g]	—	—	207	184	21	1	1
59	35	22	13	—	—	—	—	—	—	—	59	56	3	—	—
14	26	20	6	—	—	—	—	—	—	—	14	13	1	—	—
74	82	80	2	—	—	61	60	1	—	—	74	68	6	—	—
9	3	3	—	—	—	—	—	—	—	—	9	9	—	—	—
46	53	51	2	—	—	—	—	—	—	—	46	35	10	1	—
5	4	3	1	—	—	—	—	—	—	—	5	3	1	—	1
697	770	379	216	40	135	673	364	155	21	133	697	383	122	56	136
513	513	218	144	33	118	487	212	143	16	116	512	239	116	43	114
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
87	107	63	30	2	12	77	63	2	—	12	87	65	6	—	16
98	150	98	42	5	5	109	89	10	5	5	98	79	—	13	6

Table B–7.—Scientists and engineers admitted to the United States as nonimmigrants, by country or region o and by class of admission, fiscal years 1965–70—Continued

Country or region of last permanent residence	1968					1969			
	Total	J–1[e]	H–1[d]	H–2[e]	H–3[f]	Total	J–1[e]	H–1[d]	H–2[e]
All countries	5,633	4,130	436	302	765	5,362	3,975	481	308
Europe	2,591	1,839	235	222	295	2,446	1,787	239	130
Western Europe	2,370	1,631	222	222	295	2,223	1,590	219	129
Austria	32	23	5	—	4	59	32	1	22
Belgium	43	34	1	1	7	61	40	8	—
Denmark	37	28	4	2	3	53	41	7	—
France	212	157	15	—	40	183	143	9	3
Germany	361	300	26	5	30	375	291	32	12
Greece	19	10	9	—	—	24	18	4	1
Ireland	22	17	1	1	3	32	27	2	1
Italy	162	131	19	—	12	127	110	9	1
Netherlands	141	101	11	—	29	103	75	8	2
Norway	29	24	2	—	3	37	29	1	1
Spain	158	41	6	101	10	52	44	3	—
Sweden	138	85	12	—	41	153	81	7	1
Switzerland	93	46	7	—	40	96	63	11	—
Turkey	76	75	1	—	—	73	73	—	—
United Kingdom	799	516	100	112	71	742	476	116	85
Other	48	43	3	—	2	53	47	1	—
Eastern Europe	221	208	13	—	—	223	197	20	1
Czechoslovakia	44	39	5	—	—	87	70	14	—
Hungary	13	13	—	—	—	18	17	—	1
Poland	89	89	—	—	—	43	42	1	—
Rumania	14	14	—	—	—	23	20	1	—
Yugoslavia	44	39	5	—	—	47	44	3	—
Other	17	14	3	—	—	5	4	1	—
North and Central America	707	367	121	59	160	788	342	148	115
Canada	508	234	101	43	130	633	218	145	127
Cuba	—	—	—	—	—	—	—	—	—
Mexico	91	66	3	1	21	74	56	2	1
Other	108	67	17	15	9	81	68	1	7

...ientists and engineers admitted to the United States as nonimmigrants, by country or region of last permanent residence,[a] and by class of admission, fiscal years 1965–70—Continued

	1968					1969					1970				
	Total	J-1[e]	H-1[d]	H-2[e]	H-3[f]	Total	J-1[e]	H-1[d]	H-2[e]	H-3[f]	Total	J-1[e]	H-1[d]	H-2[e]	H-3[f]
	5,633	4,150	436	302	745	5,362	3,975	401	308	598	6,050	4,226	576	335	911
	2,591	1,839	235	222	295	2,446	1,787	239	130	290	2,701	1,982	258	111	350
	2,370	1,631	222	222	295	2,223	1,590	219	129	285	2,429	1,740	243	111	335
	32	23	5	—	4	59	32	1	22	4	31	22	5	2	2
	43	34	1	1	7	61	40	8	—	13	52	37	4	1	10
	37	28	4	2	3	53	41	7	—	5	31	23	4	—	4
	212	157	15	—	40	181	143	9	3	28	285	184	11	26	64
	361	300	26	5	30	375	291	32	12	40	500	398	36	17	49
	19	10	9	—	—	24	18	4	1	1	30	20	7	1	2
	22	17	1	1	3	32	27	2	1	2	26	24	—	—	2
	162	131	19	—	12	127	110	9	1	7	121	100	15	1	5
	141	101	11	—	29	103	75	8	2	18	136	97	7	1	31
	29	24	2	—	3	37	29	1	1	6	37	28	2	3	4
	158	41	6	101	10	52	44	3	—	5	43	34	1	—	8
	138	85	12	—	41	153	81	7	1	64	87	62	7	2	16
	93	46	7	—	40	96	63	11	—	22	107	70	13	—	24
	76	75	1	—	—	73	73	—	—	—	107	104	1	—	2
	799	516	100	112	71	742	476	116	85	65	801	512	128	56	105
	48	43	3	—	2	53	47	1	—	5	35	25	2	1	7
	221	208	13	—	—	223	197	20	1	5	272	242	15	—	15
	44	39	5	—	—	87	70	14	—	3	86	75	11	—	—
	13	13	—	—	—	18	17	—	1	—	30	29	1	—	—
	89	89	—	—	—	43	42	1	—	—	65	65	—	—	—
	14	14	—	—	—	23	20	1	—	2	39	27	—	—	12
	44	39	5	—	—	47	44	3	—	—	31	29	2	—	—
	17	14	3	—	—	5	4	1	—	—	21	17	1	—	3
	707	367	121	59	160	788	342	148	135	163	1,049	412	241	171	225
	508	234	101	43	130	633	218	145	127	143	797	248	232	147	170
	—	—	—	—	—	—	—	—	—	—	25	—	—	—	25
	91	68	3	9	21	74	56	2	1	15	74	49	2	1	22
	108	67	17	15	9	81	68	1	7	5	153	115	7	23	8

Table B–7.—Scientists and engineers admitted to the United States as nonimmigrants, by country or re and by class of admission, fiscal years 1965–70—Continued

Country or region of last permanent residence	1965[b]					1966			
	Total	J–1[c]	H–1[d]	H–2[e]	H–3[f]	Total	J–1[c]	H–1[d]	H
South America	440	390	17	2	31[h]	457[h]	412[h]	7[h]	
Argentina	69	64	—	1	4	—	—	—	
Bolivia	7	6	1	—	—	—	—	—	
Brazil	168	152	—	—	16	—	—	—	
Chile	28	26	2	—	—	—	—	—	
Colombia	22	20	1	—	1	—	—	—	
Ecuador	10	10	—	—	—	—	—	—	
Peru	34	33	—	—	1	—	—	—	
Venezuela	72	50	13	1	8	—	—	—	
Other	30	29	—	—	1	—	—	—	
Asia	1,458	1,294	67	7	90	1,451	1,164	63	
Near and Middle East	245	224	10	4	7	205	181	11	
Far East	1,213	1,070	57	3	83	1,246	983	52	
China (mainland)	1	1	—	—	—	—	—	—	
Hong Kong	11	9	—	—	2	12	9	—	
India	378	335	18	—	25	314	274	13	
Japan	412	351	30	2	29	558	366	29	
Korea	62	58	1	—	3	60	56	1	
Philippines	88	78	2	—	8	77	69	3	
Taiwan	61	46	3	1	11	53	45	3	
Other	200	192	3	—	5	172	164	3	
Africa	348	327	4	5	12	[i]	[i]	[i]	
All other areas	174	147	22	—	5	585[i]	536[i]	26[i]	

[a] Last residence 1 year or more.

[b] Although data for 1965 are available only on a calendar year basis, it appears to be largely consistent with what fiscal year 1965 data could be expected to show.

[c] Exchange visitors.

[d] Temporary workers of distinguished merit and ability.

[e] Temporary workers performing services unavailable in the United States.

[f] Industrial trainees.

[g] Other Eastern Europe not

[h] Data for individual countr

[i] Includes Africa and all oth

Source: National Science F
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Scientists and engineers admitted to the United States as nonimmigrants, by country or region of last permanent residence,[a] and by class of admission, fiscal years 1965–70—Continued

H–3[f]	T
38[h]	
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—	
—	
—	
—	
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—	
215	1
6	
209	1
—	
3	
27	
162	
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4	
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[i]	
22[i]	

	1965[h]					1966					1967				
	Total	J–1[e]	H–1[g]	H–2[e]	H–3[f]	Total	J–1[e]	H–1[g]	H–2[e]	H–3[f]	Total	J–1[e]	H–1[g]	H–2[e]	H–3[f]
	440	390	17	2	31[h]	457[h]	412[h]	7[h]	—	38[h]	424	360	5	1	58
	69	64	—	1	4	—	—	—	—	—	55	53	—	—	2
	7	6	1	—	—	—	—	—	—	—	8	8	—	—	—
	168	152	—	—	16	—	—	—	—	—	135	126	—	—	9
	28	26	2	—	—	—	—	—	—	—	73	36	2	—	35
	22	20	1	—	1	—	—	—	—	—	37	30	—	—	7
	10	10	—	—	—	—	—	—	—	—	13	12	—	—	1
	34	33	—	—	1	—	—	—	—	—	33	32	—	—	1
	72	50	13	1	8	—	—	—	—	—	52	45	3	1	3
	30	29	—	—	1	—	—	—	—	—	18	18	—	—	—
215	1,458	1,294	67	7	90	1,451	1,164	63	9	215	1,350	1,210	58	2	80
6	245	224	10	4	7	205	181	11	7	6	186	168	12	2	4
209	1,213	1,070	57	3	83	1,246	983	52	2	209	1,164	1,042	46	—	76
—	1	1	—	—	—	—	—	—	—	—	2	2	—	—	—
3	11	9	—	—	2	12	9	—	—	3	5	4	1	—	—
27	378	335	18	—	25	314	274	13	—	27	338	302	12	—	24
162	412	351	30	2	29	558	366	29	1	162	430	372	22	—	36
3	62	58	1	—	3	60	56	1	—	3	73	60	2	—	11
5	88	78	2	—	8	77	69	3	—	5	61	56	3	—	2
4	61	46	3	1	11	53	45	3	1	4	74	74	—	—	—
5	200	192	3	—	5	172	164	3	—	5	181	172	6	—	3
[i]	348	327	4	5	12	[i]	[i]	[i]	[i]	[i]	244	235	6	—	3
22[i]	174	147	22	—	5	585[i]	536[i]	26[i]	1[i]	22[i]	170	133	17	—	20

[f] Industrial trainees.

[g] Other Eastern Europe not separable from "Other Western Europe".

[h] Data for individual countries not available separately.

[i] Includes Africa and all other countries not elsewhere classified.

Source: National Science Foundation, from data of the Immigration and Naturalization Service, U.S. Department of Justice.

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Table B–7.—Scientists and engineers admitted to the United States as nonimmigrants, by country or re and by class of admission, fiscal years 1965–70—Continued

Country or region of last permanent residence	1968					1969			
	Total	J–1[e]	H–1[d]	H–2[e]	H–3[f]	Total	J–1[e]	H–1[d]	H
South America	395	347	4	5	39	460	379	11	
Argentina	62	53	1	2	6	72	58	4	
Bolivia	7	6	—	—	1	6	5	—	
Brazil	170	161	1	1	7	163	144	2	
Chile	28	23	—	—	5	42	28	2	
Colombia	32	26	—	—	6	53	36	—	
Ecuador	7	7	—	—	—	19	18	—	
Peru	25	23	—	—	2	30	26	—	
Venezuela	31	18	—	2	11	45	37	1	
Other	33	30	2	—	1	30	27	2	
Asia	1,568	1,258	52	16	242	1,313	1,175	49	
Near and Middle East	185	167	14	1	3	201	163	17	
Far East	1,383	1,091	38	15	239	1,112	1,012	32	
China (mainland)	3	3	—	—	—	6	4	1	
Hong Kong	17	14	1	2	—	14	14	—	
India	365	348	10	—	7	297	276	11	
Japan	589	357	22	13	197	373	336	15	
Korea	87	74	1	—	12	89	65	—	
Philippines	85	77	—	—	8	52	45	—	
Taiwan	73	63	1	—	9	92	88	2	
Other	164	155	3	—	6	189	184	3	
Africa	185	180	3	—	2	182	163	9	
All other areas	187	139	21	—	27	173	129	25	

entists and engineers admitted to the United States as nonimmigrants, by country or region of last permanent residence,[a] and by class of admission, fiscal years 1965–70—Continued

1968					1969					1970				
Total	J–1[e]	H–1[d]	H–2[e]	H–3[f]	Total	J–1[e]	H–1[d]	H–2[e]	H–3[f]	Total	J–1[e]	H–1[d]	H–2[e]	H–3[f]
395	347	4	5	39	460	379	11	6	64	671	605	7	10	49
62	53	1	2	6	72	58	4	—	10	70	52	6	1	11
7	6	—	—	1	6	5	—	—	1	17	15	—	—	2
170	161	1	1	7	163	144	2	—	17	146	136	—	—	10
28	23	—	—	5	42	28	2	—	12	281	274	—	—	7
32	26	—	—	6	53	36	—	5	12	64	55	—	7	2
7	7	—	—	—	19	18	—	—	1	9	9	—	—	—
25	23	—	—	2	30	26	—	—	4	25	18	1	—	6
31	18	—	2	11	45	37	1	1	6	39	28	—	1	10
33	30	2	—	1	30	27	2	—	1	20	18	—	1	1
1,568	1,258	52	16	242	1,313	1,175	49	33	56	1,259	907	51	36	265
185	167	14	1	3	201	163	17	10	11	184	158	16	5	5
1,383	1,091	38	15	239	1,112	1,012	32	23	45	1,075	749	35	31	260
3	3	—	—	—	6	4	1	—	1	—	—	—	—	—
17	14	1	2	—	14	14	—	—	—	9	7	1	—	1
365	348	10	—	7	297	276	11	2	8	286	253	15	—	18
589	357	22	13	197	373	336	15	—	22	478	248	7	2	221
87	74	1	—	12	89	65	—	17	7	39	15	—	21	3
85	77	—	—	8	52	45	—	4	3	52	38	2	8	4
73	63	1	—	9	92	88	2	—	2	78	67	5	—	6
164	155	3	—	6	189	184	3	—	2	133	121	5	—	7
185	180	3	—	2	182	163	9	2	8	183	166	3	2	12
187	139	21	—	27	173	129	25	2	17	187	156	16	5	10

Table B–8.—Physicians and surgeons admitted to the United States as nonimmigrants, by country and region of la and by class of admission, fiscal years 1965–70

Country or region of last permanent residence	1965[a]					1966				
	Total	J–1[c]	H–1[d]	H–2[e]	H–3[f]	Total	J–1[c]	H–1[d]	H–2[e]	H–3[f]
All countries	4,114	3,904	52	3	155	4,553	4,370	54	3	126
Europe	994	849	31	2	112	1,008	896	27	1	84
Western Europe	900	765	21	2	112	978	867	26	1	84
Austria	14	12	—	—	2	17	15	—	—	2
Belgium	30	30	—	—	—	33	32	—	—	1
Denmark	24	23	—	1	—	21	20	—	1	—
France	47	46	1	—	—	42	41	1	—	—
Germany	193	157	7	—	29	190	155	8	—	27
Greece	38	37	1	—	—	32	31	1	—	—
Ireland	47	8	—	—	39	29	20	—	—	9
Italy	80	76	4	—	—	81	80	1	—	—
Netherlands	17	17	—	—	—	23	23	—	—	—
Norway	12	11	1	—	—	15	15	—	—	—
Spain	51	51	—	—	—	61	61	—	—	—
Sweden	23	23	—	—	—	24	24	—	—	—
Switzerland	65	61	—	1	3	62	58	1	—	3
Turkey	19	19	—	—	—	15	15	—	—	—
United Kingdom	199	153	7	—	39	223	174	8	—	41
Other	41	41	—	—	—	110	103[g]	6[g]	—	1[g]
Eastern Europe	94	84	10	—	—	30	29[g]	1[g]	—	[g]
Czechoslovakia	23	18	5	—	—	—	—	—	—	—
Hungary	5	2	3	—	—	—	—	—	—	—
Poland	35	34	1	—	—	30	29	1	—	—
Rumania	1	1	—	—	—	—	—	—	—	—
Yugoslavia	26	25	1	—	—	—	—	—	—	—
Other	4	4	—	—	—	—	—	[g]	—	[g]
North and Central America	564	523	8	—	33	588	546	8	1	33
Canada	349	314	8	—	27	375	339	7	—	29
Cuba	—	—	—	—	—	1	1	—	—	—
Mexico	131	127	—	—	4	135	131	1	—	3
Other	84	82	—	—	2	77	75	—	1	1

See footnotes at end of table.

6.—Physicians and surgeons admitted to the United States as nonimmigrants, by country and region of last permanent and by class of admission, fiscal years 1965–70

	1965[1]				1966					1967				
	Total	J–1[2]	H–1[3]	H–2[4]	H–3[5]	Total	J–1[2]	H–1[3]	H–2[4]	H–3[5]	Total	J–1[2]	H–1[3]	H–2[4]	H–3[5]
	4,114	3,904	52	3	155	4,553	4,370	54	3	126	5,631	5,264	63	3	301
	994	849	31	2	112	1,008	896	27	1	84	1,509	1,234	35	—	240
	900	765	21	2	112	978	867	26	1	84	1,423	1,151	32	—	240
	14	12	—	—	2	17	15	—	—	2	22	19	1	—	2
	30	30	—	—	—	33	32	—	—	1	33	32	1	—	—
	24	23	—	1	—	21	20	—	1	—	24	24	—	—	—
	47	46	1	—	—	42	41	1	—	—	50	49	1	—	—
	193	157	7	—	29	190	155	8	—	27	341	167	4	—	170
	38	37	1	—	—	32	31	1	—	—	25	24	1	—	—
	47	8	—	—	39	29	20	—	—	9	31	27	—	—	4
	80	76	4	—	—	81	80	1	—	—	85	83	2	—	—
	17	17	—	—	—	23	23	–	—	—	18	18	—	—	—
	12	11	1	—	—	15	15	—	—	—	16	15	1	—	—
	51	51	—	—	—	61	61	—	—	—	46	45	1	—	—
	23	23	—	—	—	24	24	—	—	—	25	22	3	—	—
	65	61	—	1	3	62	58	1	—	3	34	32	1	—	1
	19	19	—	—	—	15	15	—	—	—	18	18	—	—	—
	199	153	7	—	39	223	174	8	—	41	618	539	16	—	63
	41	41	—	—	—	110	103[6]	6[6]	—	1[6]	37	37	—	—	—
	94	84	10	—	—	30	29[6]	1[6]	—	*[6]	86	83	3	—	—
	23	18	5	—	—	—	—	—	—	—	36	34	2	—	—
	5	2	3	—	—	—	—	—	—	—	1	1	—	—	—
	35	34	1	—	—	30	29	1	—	—	30	29	1	—	—
	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—
	26	25	1	—	—	—	—	—	—	—	16	16	—	—	—
	4	4	—	—	—	—	—	*	—	*	3	3	—	—	—
	564	523	8	—	33	588	546	8	1	33	605	532	11	2	58
	349	314	8	—	27	375	339	7	—	29	354	300	5	2	47
	—	—	—	—	—	1	1	—	—	—	1	1	—	—	—
	131	127	—	—	4	135	131	1	—	3	169	160	—	—	9
	84	82	—	—	2	77	75	—	1	1	81	71	8	—	2

Table B–6.—Physicians and surgeons admitted to the United States as nonimmigrants, by country and region of l and by class of admission, fiscal years 1965–70—Continued

Country or region of last permanent residence	1968					1969				
	Total	J–1[e]	H–1[d]	H–2[e]	H–3[f]	Total	J–1[e]	H–1[d]	H–2[e]	H–3[f]
All countries	5,997	5,701	61	7	228	4,759	4,460	62	20	217
Europe	1,424	1,176	36	5	207	1,261	1,029	44	6	182
Western Europe	1,341	1,096	35	5	205	1,180	950	42	6	182
Austria	28	25	—	—	3	24	17	1	—	6
Belgium	34	31	2	1	—	38	35	1	—	2
Denmark	33	31	—	—	2	20	18	1	—	1
France	54	50	2	—	2	36	35	1	—	—
Germany	291	207	7	—	77	288	193	11	—	84
Greece	32	32	—	—	—	41	40	1	—	—
Ireland	97	62	—	1	34	58	42	3	—	13
Italy	76	72	2	1	1	98	92	5	—	1
Netherlands	55	43	2	—	10	25	24	—	—	1
Norway	17	17	—	—	—	14	11	—	1	2
Spain	77	77	—	—	—	85	81	4	—	—
Sweden	47	41	6	—	—	24	22	1	—	1
Switzerland	106	85	3	—	18	55	48	1	—	6
Turkey	26	26	—	—	—	38	38	—	—	—
United Kingdom	329	258	11	2	58	297	216	12	5	64
Other	39	39	—	—	—	39	38	—	—	1
Eastern Europe	83	80	1	—	2	81	79	2	—	—
Czechoslovakia	31	30	1	—	—	40	38	2	—	—
Hungary	3	2	—	—	1	1	1	—	—	—
Poland	20	20	—	—	—	12	12	—	—	—
Rumania	4	4	—	—	—	5	5	—	—	—
Yugoslavia	23	22	—	—	1	22	22	—	—	—
Other	2	2	—	—	—	1	1	—	—	—
North and Central America	708	684	9	1	14	684	652	4	3	25
Canada	390	369	9	1	11	352	322	4	3	23
Cuba	4	4	—	—	—	1	1	—	—	—
Mexico	213	211	—	—	2	212	212	—	—	—
Other	101	100	—	—	1	119	117	—	—	2

Physicians and surgeons admitted to the United States as nonimmigrants, by country and region of last permanent and by class of admission, fiscal years 1965–70—Continued

	1968					1969					1970				
	Total	J–1[e]	H–1[d]	H–2[e]	H–3[f]	Total	J–1[e]	H–1[d]	H–2[e]	H–3[f]	Total	J–1[e]	H–1[d]	H–2[e]	H–3[f]
	5,997	5,701	61	7	228	4,759	4,460	62	20	217	5,365	5,008	83	100	174
	1,424	1,176	36	5	207	1,261	1,029	44	6	182	1,498	1,235	39	84	140
	1,341	1,096	35	5	205	1,180	950	42	6	182	1,404	1,146	35	84	139
	28	25	—	—	3	24	17	1	—	6	32	27	—	—	5
	34	31	2	1	—	38	35	1	—	2	37	35	—	—	2
	33	31	—	—	2	20	18	1	—	1	25	24	1	—	—
	54	50	2	—	2	36	35	1	—	—	55	53	1	—	1
	291	207	7	—	77	288	193	11	—	84	305	258	5	22	20
	32	32	—	—	—	41	40	1	—	—	52	51	1	—	—
	97	62	—	1	34	58	42	3	—	13	115	72	—	18	25
	76	72	2	1	1	98	92	5	—	1	90	77	4	9	—
	55	43	2	—	10	25	24	—	—	1	27	22	4	—	1
	17	17	—	—	—	14	11	—	1	2	17	15	1	1	—
	77	77	—	—	—	85	81	4	—	—	94	92	1	1	—
	47	41	6	—	—	24	22	1	—	1	41	39	—	1	1
	106	85	3	—	18	55	48	1	—	6	84	74	—	8	2
	26	26	—	—	—	38	38	—	—	—	29	29	—	—	—
	329	258	11	2	58	297	216	12	5	64	349	228	17	24	80
	39	39	—	—	—	39	38	—	—	1	52	50	—	—	2
	83	80	1	—	2	81	79	2	—	—	94	89	4	—	1
	31	30	1	—	—	40	38	2	—	—	27	25	2	—	—
	3	2	—	—	1	1	1	—	—	—	10	10	—	—	—
	20	20	—	—	—	12	12	—	—	—	19	17	2	—	—
	4	4	—	—	—	5	5	—	—	—	6	6	—	—	—
	23	22	—	—	1	22	22	—	—	—	27	26	—	—	1
	2	2	—	—	—	1	1	—	—	—	5	5	—	—	—
	708	684	9	1	14	684	652	4	3	25	838	784	23	9	22
	390	369	9	1	11	352	322	4	3	23	430	386	19	9	16
	4	4	—	—	—	1	1	—	—	—	—	—	—	—	—
	213	211	—	—	2	212	212	—	—	—	238	237	—	—	1
	101	100	—	—	1	119	117	—	—	2	170	161	4	—	5

Table 8–8.—Physicians and surgeons admitted to the United States as nonimmigrants, by country and region of last permanent residence and by class of admission, fiscal years 1965–78—Continued

Country or region of last permanent residence	1965[b]					1966				
	Total	J–1[c]	H–1[d]	H–2[e]	H–3[f]	Total	J–1[c]	H–1[d]	H–2[e]	H–3[f]
South America	182	181	—	—	1	212[h]	211[h]	—	—	1[h]
Argentina	48	47	—	—	1	—	—	—	—	—
Bolivia	3	3	—	—	—	—	—	—	—	—
Brazil	34	34	—	—	—	—	—	—	—	—
Chile	13	13	—	—	—	—	—	—	—	—
Colombia	30	30	—	—	—	—	—	—	—	—
Ecuador	1	1	—	—	—	—	—	—	—	—
Peru	16	16	—	—	—	—	—	—	—	—
Venezuela	29	29	—	—	—	—	—	—	—	—
Other	8	8	—	—	—	—	—	—	—	—
Asia	2,171	2,154	10	1	6	2,567	2,543	16	1	7
Near and Middle East	243	240	3	—	—	267	262	4	—	1
Far East	1,928	1,914	7	1	6	2,300	2,281	12	1	6
China (mainland)	3	2	—	—	—	2	2	—	—	—
Hong Kong	33	32	—	—	1	36	36	—	—	—
India	356	352	2	—	2	450	444	4	—	2
Japan	363	359	3	1	—	424	423	—	1	—
Korea	247	247	—	—	—	297	291	6	—	—
Philippines	573	572	1	—	—	754	754	—	—	—
Taiwan	83	81	1	—	—	94	90	2	—	2
Other	270	268	—	—	2	243	241	—	—	2
Africa	84	81	—	—	3	[i]	[i]	[i]	[i]	[i]
All other areas	119	116	3	—	—	178[i]	174[i]	3[i]	[i]	1[i]

[a] Last residence 1 year or more.

[b] Although data for 1965 are available only on a calendar year basis, it appears to be largely consistent with what fiscal year 1965 data could be expected to show.

[c] Exchange visitors.

[d] Temporary workers of distinguished merit and ability.

[e] Temporary workers performing services unavailable in the United States.

[f] Industrial trainees.

[g] Other Eastern Europe not separable from

[h] Data for individual countries not availab

[i] Includes Africa and all other countries n

Source: National Science Foundation, from U.S. Department of Justice.

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—Physicians and surgeons admitted to the United States as nonimmigrants, by country and region of last permanent and by class of admission, fiscal years 1965–70—Continued

Total	1965[5]					1966					1967				
	Total	J-1[1]	H-1[6]	H-2[7]	H-3[8]	Total	J-1[1]	H-1[6]	H-2[7]	H-3[8]	Total	J-1[1]	H-1[6]	H-2[7]	H-3[8]
20	182	181	—	—	1	212[9]	211[9]	—	—	1[9]	208	204	4	—	—
4	48	47	—	—	1	—	—	—	—	—	48	47	1	—	—
	3	3	—	—	—	—	—	—	—	—	3	3	—	—	—
5	54	54	—	—	—	—	—	—	—	—	54	53	1	—	—
2	13	13	—	—	—	—	—	—	—	—	23	23	—	—	—
2	30	30	—	—	—	—	—	—	—	—	23	23	—	—	—
	1	1	—	—	—	—	—	—	—	—	1	1	—	—	—
2	16	16	—	—	—	—	—	—	—	—	24	23	1	—	—
2	29	29	—	—	—	—	—	—	—	—	26	26	—	—	—
	8	8	—	—	—	—	—	—	—	—	8	7	1	—	—
3,07	2,171	2,154	10	1	6	2,567	2,543	16	1	7	3,079	3,067	9	1	2
29	243	240	3	—	—	267	262	4	—	1	296	291	3	1	1
2,78	1,928	1,914	7	1	6	2,300	2,281	12	1	6	2,783	2,776	6	—	1
	3	2	—	—	—	2	2	—	—	—	2	2	—	—	—
8	33	32	—	—	1	36	36	—	—	—	38	38	—	—	—
94	356	352	2	—	2	450	444	4	—	2	946	942	4	—	—
53	363	359	3	1	—	424	423	—	1	—	535	533	2	—	—
21	247	247	—	—	—	297	291	6	—	—	218	217	—	—	1
65	573	572	1	—	—	754	754	—	—	—	657	657	—	—	—
7	83	81	1	—	—	94	90	2	—	2	78	78	—	—	—
30	270	268	—	—	2	243	241	—	—	2	309	309	—	—	—
10	84	81	—	—	3	[4]	[4]	[4]	[4]	[4]	101	100	—	—	1
1,5	119	116	3	—	—	178[4]	174[4]	3[4]	[4]	1[4]	129	127	2	—	—

'Other W... ly on a calendar year basis, it appears to be largely consistent with separate... to show.

elsewhere... ...t and ability.

data of th... ...unavailable in the United States.

[1] Industrial trainees.

[2] Other Eastern Europe not separable from "Other Western Europe".

[3] Data for individual countries not available separately.

[4] Includes Africa and all other countries not elsewhere classified.

Source: National Science Foundation, from data of the Immigration and Naturalization Service, U.S. Department of Justice.

Table 8–8.—Physicians and surgeons admitted to the United States as nonimmigrants, by country and regi and by class of admission, fiscal years 1965–70—Continued

Country or region of last permanent residence	1968					1969				
	Total	J–1[c]	H–1[d]	H–2[e]	H–3[f]	Total	J–1[c]	H–1[d]	H–2[e]	H–
South America	370	367	2	—	1	363	360	2	—	
Argentina	80	80	—	—	—	92	92	—	—	
Bolivia	4	4	—	—	—	13	13	—	—	
Brazil	75	74	1	—	—	66	65	—	—	
Chile	15	14	1	—	—	24	23	1	—	
Colombia	47	46	—	—	1	51	51	—	—	
Ecuador	5	5	—	—	—	4	4	—	—	
Peru	75	75	—	—	—	66	66	—	—	
Venezuela	47	47	—	—	—	29	28	1	—	
Other	22	22	—	—	—	18	18	—	—	
Asia	3,286	3,268	13	1	4	2,216	2,191	11	11	
Near and Middle East	459	455	3	1	—	337	331	3	2	
Far East	2,827	2,813	10	—	4	1,879	1,860	8	9	
China (mainland)	—	—	—	—	—	4	4	—	—	
Hong Kong	51	50	—	—	1	23	23	—	—	
India	914	907	4	—	3	619	611	6	1	
Japan	353	348	5	—	—	269	268	1	—	
Korea	277	277	—	—	—	165	157	1	7	
Philippines	702	701	1	—	—	329	329	—	—	
Taiwan	139	139	—	—	—	118	118	—	—	
Other	391	391	—	—	—	352	350	—	1	
Africa	126	125	—	—	1	119	115	1	—	
All other areas	83	81	1	—	1	116	113	—	—	

f last pe cians and surgeons admitted to the United States as nonimmigrants, by country and region of last permanent and by class of admission, fiscal years 1965–70—Continued

	1968					1969					1970				
Tota	Total	J–1[e]	H–1[d]	H–2[e]	H–3[f]	Total	J–1[e]	H–1[d]	H–2[e]	H–3[f]	Total	J–1[e]	H–1[d]	H–2[e]	H–3[f]
45	370	367	2	—	1	363	360	2	—	1	451	443	5	—	3
10	80	80	—	—	—	92	92	—	—	—	107	105	—	—	2
	4	4	—	—	—	13	13	—	—	—	9	9	—	—	—
7	75	74	1	—	—	66	65	—	—	1	70	70	—	—	—
4	15	14	1	—	—	24	23	1	—	—	41	41	—	—	—
6	47	46	—	—	1	51	51	—	—	—	60	58	2	—	—
1	5	5	—	—	—	4	4	—	—	—	10	10	—	—	—
7	75	75	—	—	—	66	66	—	—	—	76	76	—	—	—
4	47	47	—	—	—	29	28	1	—	—	48	48	—	—	—
3	22	22	—	—	—	18	18	—	—	—	30	26	3	—	1
2,30	3,286	3,268	13	1	4	2,216	2,191	11	11	3	2,308	2,294	10	—	4
37	459	455	3	1	—	337	331	3	2	1	378	375	2	—	1
1,93	2,827	2,813	10	—	4	1,879	1,860	8	9	2	1,930	1,919	8	—	3
	—	—	—	—	—	4	4	—	—	—	2	2	—	—	—
4	51	50	—	—	1	23	23	—	—	—	45	45	—	—	—
74	914	907	4	—	3	619	611	6	1	1	749	745	3	—	1
27	353	348	5	—	—	269	268	1	—	—	276	275	1	—	—
10	277	277	—	—	—	165	157	1	7	—	106	106	—	—	—
25	702	701	1	—	—	329	329	—	—	—	256	256	—	—	—
8	139	139	—	—	—	118	118	—	—	—	88	86	1	—	1
40	391	391	—	—	—	352	350	—	1	1	408	404	3	—	1
15	126	125	—	—	1	119	115	1	—	3	150	138	2	7	3
12	83	81	1	—	1	116	113	—	—	3	120	114	4	—	2

Table B-9.—Foreign students of science and engineering* in U. S. universities and colleges, by country of citizenship, academic years 1966–67 and 1969–70

Country of citizenship	Academic year 1966–67			Academic year 1969–70		
	Total, science & engineering students	Science students	Engineering students	Total, science & engineering students	Science students	Engineering students
All countries	56,839	35,200	21,639	72,076	42,345	29,731
Europe	7,683	4,883	2,800	9,156	5,778	3,378
Western Europe	7,259	4,624	2,635	8,506	5,408	3,098
Austria	121	85	36	129	89	40
Belgium	175	101	74	220	125	95
Denmark	105	73	32	125	101	24
France	518	290	228	770	431	339
Germany	947	669	278	1,029	738	291
Greece	1,139	572	567	1,134	559	575
Ireland	197	165	32	223	184	39
Italy	395	261	134	490	305	185
Netherlands	118	233	85	387	273	114
Norway	401	142	261	359	150	209
Spain	187	122	65	223	141	80
Sweden	135	106	29	184	155	29
Switzerland	135	84	51	205	126	79
Turkey	762	369	393	908	470	438
United Kingdom	1,539	1,231	308	1,861	1,381	480
All other	183	121	[illegible]	259	178	81
Eastern Europe	424	259	165	650	370	280
Czechoslovakia	31	18	13	157	98	59
Hungary	54	39	15	66	37	29
Poland	120	78	42	149	76	73
Rumania	23	7	16	49	20	29
Yugoslavia	114	73	41	172	108	64
All other	82	44	38	57	31	26

See footnotes at end of table.

Table B-9.—Foreign students of sci[illegible] by country of citizenship, academi[illegible]

Country of citizenship	Acad[illegible]
	Total, science engineer[illegible] students
North and Central America	9,9[illegible]
Canada	5,1[illegible]
Mexico	89[illegible]
Cuba	1,1[illegible]
All other	2,8[illegible]
South America	4,3[illegible]
Argentina	4[illegible]
Bolivia	2[illegible]
Brazil	4[illegible]
Chile	3[illegible]
Colombia	8[illegible]
Ecuador	2[illegible]
Peru	5[illegible]
Venezuela	8[illegible]
All other	1[illegible]
Asia	29,2[illegible]
Near and Middle East	7,9[illegible]
Far East	21,2[illegible]
China (total)	6,4[illegible]
Hong Kong	2,3[illegible]
India	5,9[illegible]
Japan	1,5[illegible]
Korea	1,8[illegible]
Philippines	1,0[illegible]
All other	2,1[illegible]
Africa	4,5[illegible]
United Arab Republic	6[illegible]
Nigeria	1,1[illegible]
All other	2,7[illegible]
All other areas	9[illegible]

* Includes agricultural, life, physical,

Source: Institute of International Edu

Table B–9.—Foreign students of science and engineering* in U. S. universities and colleges, by country of citizenship, academic years 1966–67 and 1969–70—Continued

Country of citizenship	Academic year 1966–67			Academic year 1969–70		
	Total, science & engineering students	Science students	Engineering students	Total, science & engineering students	Science students	Engineering students
North and Central America	9,953	6,902	3,051	10,696	7,422	3,274
Canada	5,047	3,877	1,170	5,210	4,109	1,101
Mexico	894	523	371	1,100	676	424
Cuba	1,175	600	575	1,129	553	576
All other	2,837	1,902	935	3,257	2,084	1,173
South America	4,382	2,551	1,831	5,589	3,409	2,180
Argentina	425	312	113	558	438	120
Bolivia	213	105	108	256	122	134
Brazil	450	291	159	770	513	257
Chile	391	271	120	491	340	151
Colombia	887	467	420	1,062	632	430
Ecuador	215	91	124	301	131	170
Peru	574	324	250	671	383	288
Venezuela	855	390	465	933	432	501
All other	372	300	72	547	418	129
Asia	29,285	16,638	12,647	40,473	21,469	19,004
Near and Middle East	7,990	3,790	4,200	9,025	3,913	5,112
Far East	21,295	12,848	8,447	31,448	17,556	13,892
China (total)	6,408	3,920	2,488	8,856	5,381	3,475
Hong Kong	2,323	1,511	812	4,647	2,742	1,905
India	5,968	2,665	3,303	8,903	3,371	5,532
Japan	1,525	1,119	406	1,739	1,233	506
Korea	1,859	1,288	571	2,347	1,521	826
Philippines	1,030	840	190	1,070	800	270
All other	2,182	1,505	677	3,886	2,508	1,378
Africa	4,575	3,493	1,082	4,357	3,137	1,220
United Arab Republic	692	499	193	694	380	314
Nigeria	1,101	817	284	1,009	766	243
All other	2,782	2,177	605	2,654	1,991	663
All other areas	941	733	208	1,805	1,130	675

* Includes agricultural, life, physical, and social sciences, and engineering.

Source: Institute of International Education, *Open Doors*, 1967 and 1970.

Table B–10.—Foreign scholars in fields of science and engineering at U.S. universities and colleges, by country of citizenship and broad field of major interest, academic years 1964–65 and 1969–70

Country or region of citizenship	1964–1965					1969–70				
	Total	Engineering	Natural sciences	Medical sciences	Social sciences*	Total	Engineering	Natural sciences	Medical sciences	Social sciences
All countries	7,241	689	4,317	1,425	810	9,924	1,010	5,592	2,002	1,320
Europe	2,806	247	1,828	441	290	4,038	411	2,494	621	512
Western Europe	2,525	222	1,650	394	259	3,465	338	2,136	532	459
Austria	42	3	27	7	5	89	10	57	9	13
Belgium	72	6	40	15	11	91	14	47	15	15
Denmark	33	3	19	7	4	53	6	31	8	8
France	149	20	94	18	17	194	21	124	26	23
Germany	437	31	314	53	39	628	51	449	62	66
Greece	60	7	30	17	6	92	15	44	23	10
Ireland	39	4	23	8	4	55	6	34	8	7
Italy	192	9	138	29	16	224	26	143	30	25
Netherlands	103	7	68	15	13	141	18	84	19	20
Norway	52	7	30	6	9	69	14	29	17	9
Spain	35	6	18	8	3	81	6	47	11	17
Sweden	85	5	46	25	9	109	7	62	28	12
Switzerland	141	9	99	24	9	170	10	119	27	14
Turkey	91	17	26	34	14	97	23	33	28	13
United Kingdom	947	81	652	119	95	1,310	106	800	206	198
Other	47	7	26	9	5	62	5	33	15	9
Eastern Europe	281	25	178	47	31	573	73	358	89	53
Czechoslovakia	37	3	26	7	1	266	27	173	51	15
Hungary	36	6	21	4	5	33	2	20	3	8
Poland	109	11	74	18	6	110	14	75	14	7
Rumania	8	—	7	1	—	29	9	14	2	4
Yugoslavia	77	4	40	17	16	100	12	55	18	15
Other	14	1	10	—	3	35	9	21	1	4
North and Central America	515	43	244	169	59	691	56	326	193	116
Canada	345	29	167	113	36	495	44	252	127	72
Cuba	64	4	29	23	8	49	4	16	9	20
Mexico	58	6	26	19	7	63	7	25	27	4
Other	46	4	22	14	8	84	1	33	30	20

See footnotes at end of table.

Table B–10.—Foreign scholars in fields of science and engineering at U.S. universities and colleges, by country of citizenship and broad field of major interest, academic years 1964–65 and 1969–70—Continued

Country or region of citizenship	1964–1965					1969–70				
	Total	Engineering	Natural sciences	Medical sciences	Social sciences*	Total	Engineering	Natural sciences	Medical sciences	Social sciences*
South America	282	28	119	111	24	409	23	174	150	62
Argentina	95	7	45	38	5	123	5	61	42	15
Bolivia	2	—	1	—	1	5	—	1	—	4
Brazil	60	6	29	16	9	98	8	38	27	25
Chile	21	3	9	7	2	48	2	22	20	4
Colombia	34	1	7	24	2	34	1	8	21	4
Ecuador	4	1	2	—	1	1	—	1	—	—
Peru	22	2	9	10	1	36	2	8	21	5
Venezuela	32	7	11	11	3	45	4	22	17	2
Other	12	1	6	5	—	19	1	13	2	3
Asia	3,144	325	1,853	613	353	3,973	437	2,365	879	492
Near & middle east	424	44	246	88	46	593	54	321	127	91
Far east	2,720	281	1,607	525	307	3,380	383	1,844	752	401
China (total)	163	91	169	48	55	478	104	265	44	65
Hong Kong	21	1	13	6	1	37	4	22	6	5
India	907	91	615	98	103	1,164	131	712	169	152
Japan	1,039	81	665	236	57	1,194	112	683	315	84
Korea	159	12	66	27	54	193	16	67	53	57
Philippines	126	3	36	70	17	168	5	37	110	16
Other	105	2	43	40	20	146	11	58	55	22
Africa	187	22	75	45	45	301	42	114	57	88
United Arab Republic	79	14	33	24	8	137	31	63	24	19
Other Africa	108	8	42	21	38	164	11	51	33	69
All other areas	307	24	198	46	39	512	41	319	102	50

* The Institute of International Education's definition of social science includes: Economics, history, home economics, international relations, law, political science, psychology, public administration, social work, and sociology.

Source: Institute of International Education, *Open Doors*, 1965 and 1970.

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Other Science Resources Publications

Title	*NSF Number*	*Price*
Resources for Scientific Activities at Universities and Colleges, 1971	72–315	In press
An Analysis of Federal R&D Funding by Function, Fiscal Years 1963–73	72–313	In press
Science Resources Studies Highlights, "Changes in Graduate Programs in Science and Engineering, 1970–72 and 1972–74"	72–311	—
A Price Index for Deflation of Academic R&D Expenditures	72–310	$0.25
Research and Development in Industry, 1970	72–309	$1.00
Science Resources Studies Highlights, "First-Year, Full-Time Graduate Science Enrollment Continues to Decline"	72–308	—
Science Resources Studies Highlights, "Total Scientific and Technical Personnel in Industry Remains Level, R&D Personnel Lower in 1970"	72–306	—
Papers and Proceedings of Colloquium of Research and Development and Economic Growth/Productivity	72–304	$0.75
Federal Funds for Academic Science, Fiscal Year 1970	72–301	$0.70
National Patterns of R&D Resources, 1953–72. Funds and Manpower in the United States	72–300	$0.50
Science Resources Studies Highlights, "Federal Scientific, Technical, and Health Personnel in 1970"	71–47	—
Science Resources Studies Highlights, "Undergraduate Enrollments in Science and Engineering"	71–42	—

Title
Federal Funds for Research Other Scientific Activi 1970, 1971, and 1972,
Science Resources Studies "Enrollment Increase in Public Secondary Sc
Federal Support to Universi Nonprofit Institutions,
Reviews of Data on Science in Graduate Science a
Science Resources Studies Science Teachers (Exp
Scientific Activities of Indep Institutions, 1970
Research and Development Fiscal Years 1968 and
Impact of Changes in Feder Patterns on Academic
Directory of Federal R&D I June 30, 1968
Research and Development Agencies, Fiscal Years

PRINTING OFFICE: 1972—C

urces Publications

	NSF Number	Price
versities	72–315	In press
Function,	72–313	In press
Changes in Engineering,	72–311	—
R&D Expenditures	72–310	$0.25
1970	72–309	$1.00
First-Year, ment Continues	72–308	—
Total Scientific and Remains Level, R&D	72–306	—
l Research and h Productivity	72–304	$0.75
cal Year 1970	72–301	$0.70
53–72. Funds and	72–300	$0.50
ederal Scientific, 1970"	71–47	—
Undergraduate ring"	71–42	—

Title	NSF Number	Price
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